MEANING IN LIFE AND PSYCHOLOGICAL WELLNESS AMONG LATINO IMMIGRANTS: ROLE OF ATTACHMENT, BELONGINGNESS, AND HOPE

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Guided by attachment theory and principles of positive psychology, a conceptual model was developed depicting the direct and indirect effects of attachment insecurity, state hope, belongingness, and meaning in life on wellness indicators (i.e., life satisfaction, physical health, and depression) of first generation Latino immigrants in the U.S. Specifically, the present study proposed that the effects of attachment insecurity on Latino immigrants' wellness would be mediated by two tiers of factors. The first tier consisted of state hope (i.e., general state hope, spiritual state hope, mastery state hope) and sense of belonging (i.e., general belongingness; connectedness with mainstream/ethnic community), which represented individual-level and relational factors, respectively, salient in Latino culture. Greater attachment insecurity was hypothesized to contribute to a compromised MIL and poorer wellness by decreasing state hope and sense of belongingness. A total of 352 first-generation Latino immigrants from Texas participated in this study. The exploratory factor analysis on the Experiences in Close Relationships Scale revealed a two-factor factor structure that is different from the two factors of adult attachment typically found with American samples (i.e., anxiety and avoidance). The emerged two factors represent anxious-distancing attachment and comfort-seeking attachment. Results from structural equation modeling analysis showed adequate model fit with the data. The final model indicated that the effects of comfort-seeking attachment on wellness were fully mediated by two layers of mediators (belongingness and state hope as the first layer and meaning in life as the second layer). In addition, the effect of anxious-distancing attachment on wellness was fully mediated by belongingness and meaning in life but not through state hope. Bootstrap

methods were used to assess the significance magnitude of these indirect effects. Comfort-seeking attachment explained 13% of the variance in state hope and both attachment variables explained 36% of the variance in sense of belongingness. Anxious-distancing attachment, comfort-seeking attachment, state hope, and sense of belongingness explained 78% of the variance in meaning in life, and the overall model explained 75% of the variance in wellness. Limitations, future directions, and implications for counseling and theory are discussed from attachment theory, positive psychology, and immigration perspectives.

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CHAPTER 1

OVERVIEW OF PROPOSED STUDY

Latinos comprise the largest and one of the fastest growing minority groups in the United States (U.S. Census Bureau, 2012). Moreover, 48% of the 38.1 million foreign-born individuals in the U.S. reported being Hispanic origin (Grieco, 2010). Immigrants from Latin American countries face multiple stressors in the immigration process including legal documentation status (Covazos-Rehg, Zayas, & Spitznagel, 2007), separation from loved ones (Rusch & Reyes, 2012), discrimination (Flores et al., 2008), language barriers, and access to health care services (Perez & Fortuna, 2005). Often these stressors are compounded and contributing to poor health and wellness (Perez & Fortuna, 2005). Among various factors that affect Latino immigrants' adjustment and wellness, meaning in life (MIL) may be particularly important for this population since having purpose and significance in one's life allows individuals to endure stressful situations (Dunn & O'Brien, 2009).

Meaning in life has enjoyed a recent surge in psychology literature (Heintzelman & King, 2014). Drawing from existential philosophers, Viktor Frankl (1985) was among the first to introduce MIL into psychology literature. Frankl understood MIL as personal accomplishments along with encounters with others and nature. Since then, multiple definitions have emerged, though most definitions involve one or more of the following: the extent to which one comprehends that one's life is significant (i.e., cognitive component), the degree to one experiences a purpose in life (i.e., motivational component; Steger, 2012), and the affective quality of the sense of significance (Reker & Wong, 1988). Given the positive outlook and understanding of MIL, it is not surprising that MIL has consistently been found to predict overall wellness, including higher levels of life satisfaction and fewer depressive symptoms (e.g., Steger,

Frazier, Oishi, & Kaler, 2006). Meaning in life has also been linked to physical health and wellbeing (Ryff, 2013).

Attachment Theory and Meaning in Life

In the current study, we use attachment theory (Bowlby, 1969/1982) as a conceptual framework to understand the protective effects of MIL on Latino immigrants' wellness. According to the theory, the quality of emotional bonds developed between infants and their primary caregivers remains moderately stable into adulthood (Fraley, 2002; Hamilton, 2000) and serve as guiding "internal working models" that influence close relationships in adulthood (Hazan & Shaver, 1994, p. 5). Contemporary adult attachment researchers conceptualize attachment styles using a two-dimensional model of adult attachment (Brennan, Clark, & Shaver, 1998), which include *attachment anxiety,* characterized by fear of rejection and a need for reassurance, and *attachment avoidance,* characterized by fear of intimacy and by discomfort with closeness and self-disclosure. In this conceptual model, *secure attachment* refers to those with both low anxiety and low avoidance. The attachment dimensions (Anxiety and Avoidance) have been theoretically and empirically linked with various aspects of general wellness, including high levels of depression (Marganska, Gallagher, & Miranda, 2013) and low levels of life satisfaction (Wright & Perrone, 2010). Somatic complaints have been consistently found for attachment anxiety, but not attachment avoidance (e.g., Kidd & Sheffield, 2005), though study of somatic complaints may be particularly important for Latino immigrants, since they are more likely to report physical complaints than psychological symptoms (Angel & Guarnaccia, 1989; Escobar, 1995).

Attachment theorists have proposed that the attachment behavioral system could be activated under threats of meaninglessness, which elicits attachment behaviors in order to

maintain meaning (Mikulincer & Shaver, 2013). These authors reason that since attachment security is often associated with reports of positive affect and positive relationships behaviors (e.g., forming and maintaining relationships), it should be positively associated with MIL; conversely, insecure attachment should be negatively associated with MIL. Researchers have since explored this relationship and found negative associations between attachment insecurity and presence of MIL (Lopez, Ramos, Nisenbaum, Thind, & Ortiz-Rodriguez, 2015; Reizer, Dahan, & Shaver, 2013). Another study found that individuals with attachment security reported higher levels of MIL than those with insecure attachment (Bodner, Bergman, Cohen-Fridel, 2013). Taken together these finding suggests direct and indirect effects of attachment dimensions and MIL on wellness.

In addition to attachment and MIL, we identify state hope and sense of belongingness as two unique factors for Latino immigrants that conceptually fit well with the attachment system by contributing to experiencing a stable and consistent sense of MIL, and, in turn for immigrants' wellness. Hope is understood as a cognitive set of pathways thinking (developing and forming plans to achieve desired goals) and agency (sense of having the ability to achieve these goals) (Snyder, 2002). State hope is applied to more specific times and proximal events (Snyder, et al., 1996). We anticipate for hope to be germane to the immigrant experience given the amount of loss (i.e., of country, family, network) and stressors (i.e., acculturative stress). Evidence supports the negative relationship between attachment insecurity and state hope (Simmons, Nelson, & Quick, 2003). Immigrants may also derive meaning from pursuing and accomplishing their long-term goals, and studies have found that MIL and hope produce indirect and direct effects on wellbeing indicators (Bronk, Hill, Lapsley, Talib, & Finch, 2009).

Having a sense of belongingness is conceptually related to experiencing security from close relationships, a central tenant to attachment theory. Like attachment bonds, belongingness theorists argue that it is an innate need that drives human behaviors (Baumeister & Leary, 1995). However, a key distinction is that, whereas attachment functions uniquely with different attachment relationships (e.g., parent-child, romantic partner), belongingness needs can be met through relatedness to an individual or group of people. Having a sense of belongingness may be particularly important for Latino immigrants' formation of meaning and psychological wellbeing given values of *familismo* and collectivism. In the current study we conceptualize belongingness as a general construct, with the mainstream U.S. community, and belongingness with Latinos (Yoon, Jung, Lee, & Felix-Mora, 2012). In this sense, insecure attachment orientations are likely to predict MIL by decreasing sense of belongingness. Research has supported the positive effects of belongingness among Mexican American college students (Yoon et al., 2012), however to our knowledge it has not been explored among Latino immigrants community samples.

Present Study

The present study aims to advance the literature by evaluating a developed conceptual model that depicts the direct and indirect effects of attachment insecurity, belongingness, hope, and MIL on psychological wellbeing of Latino immigrants. Attachment anxiety is characterized by hopelessness about goals, fear of rejection and failure, lower perceived social support, and lower self-worth (Mikulincer & Shaver, 2013). Therefore, individuals with anxious attachment may experience less hope about achieving long-term goals and have lower sense of belongingness, thus having lower sense of MIL and poorer wellness. Attachment avoidance is often characterized by fear of admitting defeat while pursuing goals, choosing safer goals or

overestimating their ability to achieve goals, and fear of close relationships (Mikulincer & Shaver, 2007). Individuals with high avoidant attachment are less likely to develop pathways to achieve their desired and misperceive their own ability to achieve desired goals (Meyer, Oliver, & Roth, 2005), thus may report lower levels of state hope and MIL. They are also more likely to report a poorer sense of belongingness (i.e., dissatisfied with social support received) leading to poorer MIL and lower wellness.

Structural equation modeling (SEM) was be used to evaluate the proposed theoretical model, which depicts several specific mechanisms for the relationships between attachment dimensions and psychological wellbeing using a community sample of Latino immigrants. The development of the conceptual model (see Figure 1) was guided by the attachment behavioral system. Specifically, the present study proposes that the effects of attachment insecurity on Latino immigrants' wellness would be mediated by two tiers of factors. The first tier consists of state hope (i.e., pathways thinking and agency to achieve goals) and sense of belongingness (e.g., towards the culture/community, perceived family support, etc.). Hope and belongingness represent an individual-level and a relational factor, respectively, salient in Latino culture. Based on attachment theory, we hypothesized that greater attachment insecurity would lead to lower hope in achieving one's goals as well as a poorer sense of belongingness to one's community and family which then contribute to a compromised MIL. MIL was considered the second-tier mediator in the model, and it was hypothesized to mediate the effects of attachment insecurity, hope, and belongingness on the wellness outcome variables. A sample of 230 Latino immigrants from the community were recruited to test the conceptual model.

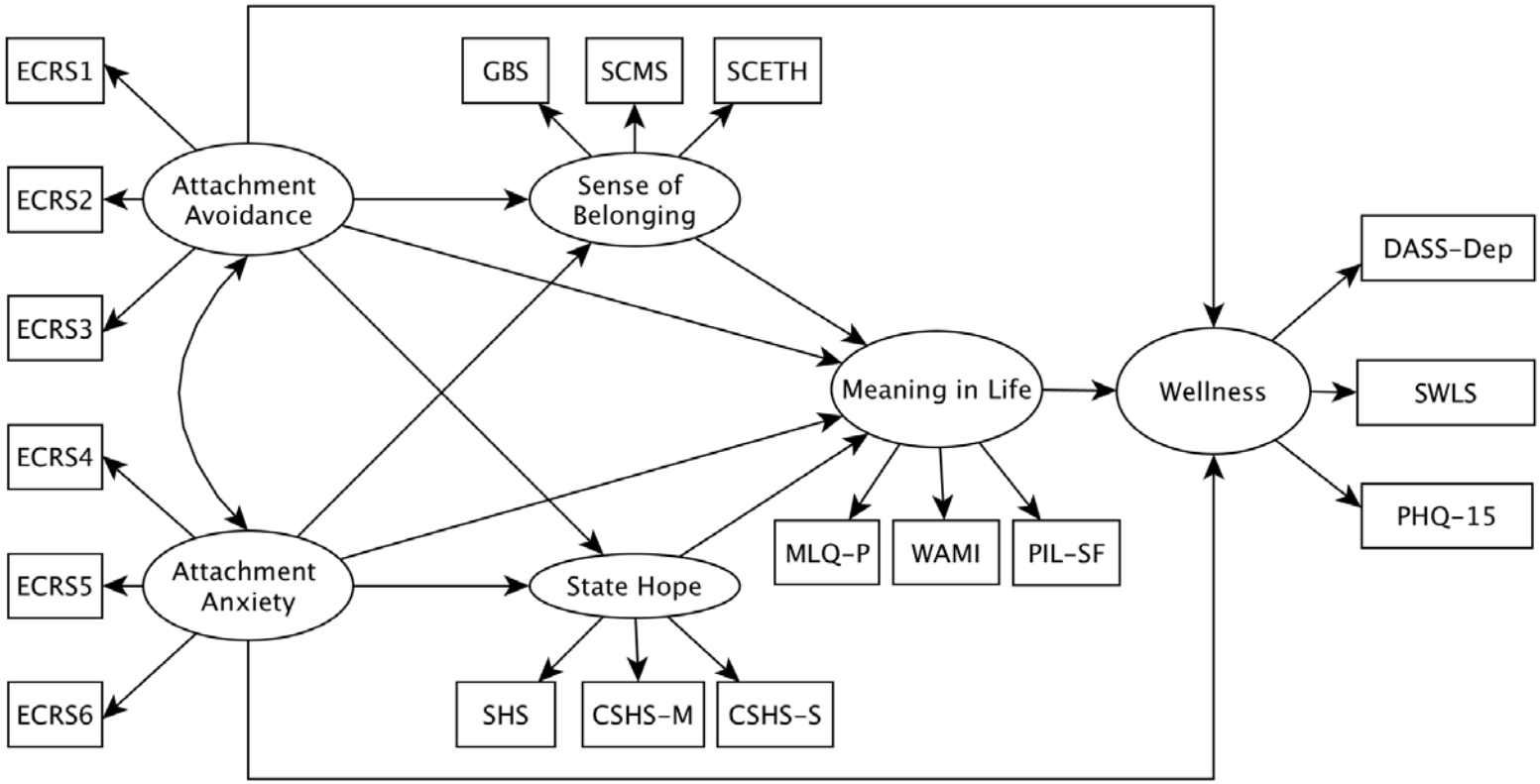

Figure 1. Proposed structural model of attachment dimensions on wellness as mediated by sense of belonging, hope and meaning in life variables.

Note. ECRS1–ECRS3 = three parcels from the Avoidance subscale of the Experiences in Close Relationships Scale; ECRS4–ECRS6 = three parcels from the Anxiety subscale of the Experiences in Close Relationships Scale; GBS = General Belongingness Scale; SCMN = Social Connectedness in Mainstream Society Scale; SCETH = Social Connectedness in Ethnic Community Scale; SHS = State-Hope Scale; CSHS-M = Comprehensive State Hope Scales—Mastery; CSHS-S = Comprehensive State Hope Scales—Spirituality; MLQ-P = Meaning in Life Questionnaire—Presence subscale; PIL-SF = Purpose in Life—Short-Form; DASS-Dep = Depression subscale of Depression, Anxiety, and Stress Scales—21; SWLS = Satisfaction with Life Scale; PHQ-15 = Somatic Scale of Patient Health Questionnaire.

CHAPTER 2

LITERATURE REVIEW

This chapter provides a more in-depth discussion on the key constructs examined in the proposed study: adult attachment, meaning in life (MIL), belongingness, and state hope. Specifically, literature related to the attachment system, including discussion of direct and indirect effects on wellness, empirical and theoretical relationships between attachment, MIL, sense of belongingness, state hope, and wellness variables of depressive symptoms, life satisfaction, and somatic complains are reviewed in the following sections. In addition, available research pertaining cultural experiences of adult immigrants from Latin America to the United States will be presented.

Meaning in Life

Though philosophers have mused about the meaning of life for centuries, MIL was introduced as a psychological construct by Viktor Frankl. The Austrian psychiatrist and philosopher was popularly known for his writings about his experiences in Nazi concentration camps (1963/1985), though he had already developed the principles behind *logotherapy* (i.e., meaning-focused psychotherapy) before the 1930s following World War I. Frankl argued that individuals are primarily and universally motivated by a pursuit of meaning in one's life. Building on his observations and experiences, he wrote that having a personal meaning set apart prisoners who survived horrific conditions of concentration camps from those who did not. Frankl summarized seminal writings on logotherapy with three central tenants: (a) life has meaning under all circumstances, (b) our primary motivation involves a *will to meaning*, and (c) we are free to find meaning in our experiences. Frankl's second tenant (will to meaning), informed by Soren Kierkegaard's writings and distinguished from Freud's pleasure principle and

Nitzsche and Adler's will to power, captured the primary motivator for human beings and informed subsequent empirical research on MIL.

Frankl's work promoted the empirical study of meaning and meaning making, which initially maintained close ties to existential psychology. For example, Crumbaugh and Maholick (1964) developed the *Purpose in Life* test (PIL), which included three parts: a 20-item Likert scale, 13 sentence completion items, and one short paragraph about participant's aspirations. The PIL measures the degree to which individuals make meaning out of their experiences and feel their lives are of significance. The PIL allowed researchers to establish a link between MIL with psychological distress and wellbeing (for a review see Bronk, 2013) with nearly 300 articles have used the PIL since then (Brandstätter, Baumann, Borasio, & Fegg, 2012), though most studies only used the 20-item scale. The PIL-Short Form (PIL-SF; Schulenberg, Schnetzer, & Buchanan, 2011), a 4-item scale was developed in response to criticisms of the PIL on multidimensionality (Steger 2006; Yalom 1980).

In his book *Meanings in Life*, Baumeister (1991) offered a comprehensive empirically driven summary of research up to that point. Like Frankl, Baumesiter argued that meaning fulfills a basic need or motivation for humans. In fact, this need to find answers and explanations for their life distinguishes humans from animals. Baumeister argued that there are four basic needs to make sense of life. The first need is for purpose, or the extent to which one's current behaviors are connected to goals and future events. Purpose in this sense can refer to goals (short-term or long-term) and feelings of fulfillment in pursuing and attaining the goals. The second need is for value. Value in this sense refers to the need to feel that thoughts and behaviors are good and justifiable. Culture and religion can offer systems of values that guide behaviors and thoughts, and impose feelings of guilt when not meeting these expectations. The

third value is for efficacy, a need for having a sense of control over events. This need refers to the extent to which individuals feel they have the ability to meet their goals and to lead a life that is consistent with their values. The fourth and final need is for self-worth, which refers to a motivation to find ways to feel unique and superior to others. Baumeister argued that downward social comparison (comparing oneself to people worse off) and the phenomena of taking credit for success and attributing failure to external circumstances are methods to maintain self-worth. MIL scholars argue that Baumeister's text marked a new period of research on MIL (Steger & Kashdan, 2007).

Positive Psychology and Meaning in Life

Simultaneous to Baumeister's work on MIL, various theories of wellbeing emerged and considered MIL as a central construct to psychological health. For example, Ryff (1989) proposed a theoretical model of psychological wellbeing based on an extensive literature review. Her work was grounded in developmental and humanistic theories within psychology (including some writings on wellbeing, such as Jahoda, 1958) with a philosophical approach to understand concerns and meanings of a good life (e.g., Becker, 1973). Ryff's model included six core dimensions of psychological wellbeing: self-acceptance, positive relations with people, autonomy, environmental mastery, purpose in life, and personal growth. She defined purpose in life as having goals and direction in life and having a sense meaning for one's past and present. Over the years, this model was updated to include research on physical and psychological health indicators (Ryff & Singer, 1998). Consistent with Frankl's understanding of psychological functioning, this model of psychological wellbeing considers the role of suffering and negative experiences within psychological health.

Though research has found cultural differences in ratings of each of these dimensions (Ryff & Singer, 1998), the six-factor structure has found support in Latin American samples (van Dierendonck, Díaz, Rodríguez-Carvajal, Blanco, Moreno-Jiménez, 2008). Ryff's theory has recently undergone some criticism regarding its factorial structure because several dimensions of the theory are highly correlated (Springer & Hauser, 2006). Nevertheless, her model was the first to consider MIL to play a central role in psychological wellbeing, and prompted the development of subsequent models of positive psychology.

Another major development in the literature of psychological wellbeing is the emergence of positive psychology. This movement certainly built upon past research and writings, though it was not until Seligman's (1998) American Psychological Association presidential address and concept paper that positive psychology propelled into the field of psychology. As a movement, positive psychology emerged in response to the bulk of research in mainstream psychology then mostly focusing on pathology and negative experiences rather than strengths and values. In his book on authentic happiness, Seligman (2002) articulated the three pillars of positive psychology: studies of positive emotions, studies of positive strengths and virtues, and studies of positive institutions (e.g., strong families, democracy). He argued that positive institutions should encourage development of strengths and virtues, which in turn enhance positive emotions. Seligman originally argued that meaning and purpose were long-term fulfillment of these other aspects of positive psychology. However, his model has since been expanded to include (a) the pleasant life (positive emotions about past, present, and future), (b) the engaged life (strengths and talents), and (c) meaningful life (belonging to and serving positive institutions) (Duckworth, Steen, & Seligman, 2006).

Critics of early work in positive psychology point to the disproportionally heavy focus on positive aspects and the exclusion of suffering and challenges (e.g., Wong, 2011). Although the shift in perspective to positive features of psychology was necessary, some argue for a more balanced understanding of human functioning for mainstream psychology and research. For example, Wong (2011) argued that a dual-systems approach, which includes both the positive and negative aspects of human functioning, bridges existential and positive psychology traditions. In this sense, a more comprehensive understanding of positive psychology places MIL in a more central role in human functioning than simply being a component of living the good life or happiness.

More recently, Steger (2013) proposed a definition that draws from both traditions: "Meaning is the web of connections, understandings, and interpretations that help us comprehend our experience and formulate plans directing our energies to the achievement of our desired future" (p. 165). This definition includes both a cognitive component and a motivational component to MIL. The cognitive component refers to the extent to which an individual understands his or her self, the world, and how one fits within the world. Individuals with high cognitive MIL have a consistent life narrative and are able to incorporate new experiences into this narrative. The cognitive component sets the stage for the motivational component, which refers to an individual's ability to develop goals and experience one's life as having a sense of purpose. Meaning researchers and theorists alike have questioned whether meaning and purpose in life are redundant. According to this definition, however, purpose is only one component to MIL. Empirical work has supported this assumption, revealing differential functioning between purpose and MIL (George & Park, 2013).

Theoretical Frameworks of Meaning in Life

Theorists and researchers from various theoretical traditions have proposed models consistent with their understanding of psychological functioning. In the following section we describe three models that attempt to ground these findings into concise theories. However, in the present study we use attachment theory (Bowlby, 1969/1982) as a theoretical framework for understanding MIL and wellness since attachment theory offers a behavioral framework for understanding individual differences in motivational and cognitive elements to meaning in life. Attachment theory is described in more detail in a later section. Below we present an overview of three theoretical frameworks for MIL.

One theory that draws directly from Frankl's writings emphasizes meaning-seeking (or "will to meaning") as a primary motivation in life (Wong, 2014). Wong summarizes his theory in five hypotheses: (a) the will to meaning is primarily spiritual in nature (self-transcendence hypothesis); (b) the intrinsic value of life is more adaptive than alternative global beliefs (ultimate meaning hypothesis); (c) the meaning mindset leads to more positive outcomes than the success mindset (meaning mindset hypothesis); (d) belief in freedom and responsibility will lead to greater authenticity (freedom of will hypothesis); (e) self-transcendence is more likely to lead to discovery of meaning compared to self-interest (value hypothesis of discovering meaning). This theory was developed in response to early positive psychology research that emphasized hedonic wellbeing to the exclusion of eudaemonic happiness and resilience. Consistent with this framework, earlier trends in positive psychology that emphasized a pursuit of happiness (i.e., hedonic wellbeing) may be detrimental to authentic happiness.

Another model is the meaning maintenance model (Heine, Proulx, & Vohs, 2006; Proulx & Inzlicht, 2012), which draws from existential philosophy and psychology more broadly. This

theory conceptualizes meaning as the expected relationships or associations primarily between self and the world. In the presence of threats or disruptions to these meanings, individuals attempt to establish meaning in alternative frameworks. This theory indicates meaning in life has four primary domains, including self-esteem, certainty, belongingness, and symbolic immortality. The key feature of this theory is the fluid compensation model, which proposes that when meaning in one domain is being threatened, individuals will seek to reaffirm meaning in another domain. Empirical work based on this model tends to focus on experimental paradigms on meaning systems (e.g., Proulx, Heine, & Vohs, 2010).

A third theory that has gained traction recently is the meaning-making model (Park, 2010; Park & Folkman, 1997), which is grounded in the stress-and-coping model (Lazarus & Folkman, 1987) and shattered assumptions theory (Janoff-Bulman, 1992). This model conceptualizes meaning making efforts as coping with stress resulting from discrepancies between global and situational meaning. According to this framework, individuals' global meaning systems involve a cognitive framework of beliefs (about the world, self, and self-in-world), goals, and subjective meaning or purpose. Certain stressful events may challenge these meaning systems. If an individual appraises a discrepancy between the event and the global meaning systems, he or she will engage in meaning-making efforts to restore beliefs that one's life is meaningful and the world is worthwhile, ultimately leading to better psychological adjustment. Park's meaning-making model has been used primarily in correlational research applied to clinical issues (e.g., Park et al., in press).

Prevalence and Developmental Trajectory of Meaning in Life

Past epidemiological research has found that most people report they have meaning in life. For example, one epidemiological study using Gallup Poll data, which assessed MIL with a

dichotomous variable, found that 91% of individuals across 132 nations experience a purpose or meaning in their lives (Oishi & Diener, 2014 cited by Heintzelman & King, 2014). Results from the study found that poorer countries (i.e., those with lower gross domestic product per capita) reported higher MIL. In particular, 93% of individuals in the U.S. reported having meaning in life compared to Latin American countries (e.g., Chile, Brazil, Ecuador), which had prevalence rates of 95% to 100%. Epidemiological studies revealed that nearly 83% of respondents agree or strongly agree with a statement "My life has a real purpose" (Baylor University, 2007).

In their article on MIL, Heintzelman and King (2014) interpret epidemiological data to mean that most people have meaning in their lives. To answer the question of "how meaningful is life?" they identify research studies that use the PIL and the Presence of MIL subscale of the MLQ (MLQ-Presence), two of the most prominent self-report measures on MIL research. They identify 73 and 122 means for the PIL and MLQ-Presence, respectively, from peer-reviewed articles and plotted out the means on frequency distributions. Both measures are Likert scales ranging from 1 to 7, with higher scores indicating higher perceived MIL. They found that means for the PIL range from 3.65 to 6.24, with most means (nearly 44% of means) ranging from 5 to 5.5. The weighted mean of PIL means was 5.14 and significantly higher than the midpoint of the scale (i.e., a 4 on the 7-point Likert scale). Likewise, means for the MLQ-Presence ranged from 2.94 to 6.08, with most means (nearly 51%) falling between 4.51 and 4.99. The mean of MLQ-Presence means was 4.7 and significantly higher than the midpoint for the scale. In an answer to "how meaningful is life?" Heintzelman and King conclude that people subjectively understand their lives as being pretty meaningful. Their article has received some criticism (e.g., Brown & Wong, 2015) primarily surrounding methodology, use of self-report measures, and failing to distinguish between meaning and life satisfaction. However, the authors point to an important

construct within psychology. A follow-up question to Heintzelman and King's might be, "Why does meaning matter?" We describe the positive effects on wellness following a brief overview of MIL across the lifespan.

Since MIL is likely to change across one's lifespan a handful of studies have evaluated the trends across developmental stages. In an early study, Zika and Chamberlain (1992) evaluated MIL with life satisfaction, positive affect, and negative affect. The authors measured MIL using the PIL, the LRI, and the meaning subscale of the Sense of Coherence Scale (SOC, Anotnovsky, 1983). The authors evaluated these associations in two groups of adults: stay-at-home mothers of young children (N = 183, M_{age} = 29, SD = 4.1) and adults ages 60 and older (N = 150, 87 women, M_{age} = 69, SD = 5.8). Findings indicated significant associations between MIL with positive (i.e., life satisfaction, wellbeing, positive affect) and negative (i.e., psychological distress, negative affect) indicators of wellbeing. However, correlation coefficients were larger for positive indicators, highlighting the importance of evaluating both positive and negative aspects of wellbeing. Results of canonical correlations indicated that MIL measures accounted for 50% of the variance in wellbeing items. Though the study did not evaluate mean differences, significant t tests indicated that the sample of mothers reported higher levels of MIL on the LRI, but not the PIL or SOC-Mean. Moreover, correlations between MIL measures and outcome variables were numerically larger for the mothers sample, but were not significant (using Fisher r to z transformation). These additional analyses suggest developmental differences in some aspects of MIL.

More recently, Steger, Oishi, and Kashdan (2009) evaluated the developmental trajectory of MIL in a large sample of Internet users (N = 8756). The authors evaluated MLQ and wellness (life satisfaction, happiness, positive and negative affect, and depression) across four groups

(ages 18-24 years, 25-44 years, 45-64 years, and 65 years and older). Results indicated invariance of the structure of MLQ across age groups. Moreover, higher levels of MLQ-Presence was reported at later life stages, whereas higher levels of MLQ-Search was found at earlier stages, suggesting that presence of MIL increases across one's lifespan. Although MLQ-Presence had similar associations to wellbeing across the four age groups, the associations of MLQ-Search and poorer wellbeing were stronger at younger age groups. Taken together it seems there are some developmental trends in MIL, however MIL seems to be associated with both physical and psychological wellness consistently throughout the lifespan.

Meaning in Life and Wellness

Although study of meaning on wellbeing were certainly present in the literature, it was not until the 1990s with the emergence of positive psychology that this line of work found its way into mainstream research. Within this line of work, associations of MIL with depression and life satisfaction have been consistently supported. For example, to establish convergent validity of the MLQ, which measures Presence and Search for MIL, Steger and colleagues (2006) found significant associations of MLQ-Presence with measures of depression (r = -.48) and life satisfaction (r = .46) in a sample of 305 college students. Fewer studies have evaluated examined the positive effects of MIL on general somatic complaints, though most studies focus on MIL among individuals with physical illness. The following section will focus on research on MIL and depression, life satisfaction, and somatic complaints.

Depression. One of the early studies examined the mediating role of purpose in life on depression and self-derogation in substance abuse and suicidal ideation (Harlow, Newcomb, & Bentler, 1986). Using the PIL for measuring meaning, they used a college sample (N = 722) analyzing structural models for men and women. Results indicated that purpose in life was

significantly associated with depression (r = -.64 and -.65) and suicidal ideation (r = -.55 and -.63) for women and men, respectively. Structural analyses confirmed their model in that depression and self-derogation predicted substance use in men and suicidal ideation in women. Purpose in life mediated this relationship: with low purpose (conceptualized as meaninglessness) women were more likely to engage in substance use and men were more likely to report suicidal ideation.

Mascaro and Rosen (2008) examined the longitudinal effects of MIL on depression using a cross-lagged panel analysis with 395 college students. This study used three measures of meaning in life, the Framework subscale of the 14-item revised Life Regards Inventory (LRI-R; Debats, 1998), the 15-item Spiritual Meaning Scale (SMS, Mascaro, Rosen, & Morey, 2004), and the 57-item Personal Meaning Profile (PMP; Wong, 1998). Three measures were also used to measure depression. Baseline MIL negatively predicted depressions after two months (-.14) even after controlling for baseline levels of depression.

Kleiman, Adams, Kashdan, and Riskind (2013) examined various predictors of suicidal ideation, including meaning in life (with the MLQ), gratitude, and grit. Using a college sample (N = 209), the authors found that individuals endorsing gratitude and grit reported lower suicidal ideation after four weeks. MIL had a mediation effect, such that gratitude and grit offer protective effects for suicide by enhancing MIL. Inspection of bivariate correlations also found that MIL at baseline was associated with lower suicidal ideation (r = -.39) and fewer depressive symptoms (r = -.27) after four weeks. This study lends support to the hypothesis that subjective MIL predicts depressive symptoms longitudinally.

Life satisfaction. In addition to negative symptoms as outcome, past work has also evaluated the effects of MIL on positive wellbeing indicators. One study (Scannell, Allen,

Burton, 2002) evaluated the impact of LRI-R dimensions (fulfillment and framework) on both positive and negative indicators in a community adult sample from Australia (N = 83). They found that both fulfillment and framework are significantly and negatively predicted by negative symptom indicators (e.g., depression, anxiety, hostility, somatization). However, these effects are mediated when including positive indicators. In particular, when entering distress indicators depression was a significant predictor of MIL variables (framework and fulfillment). However, the effects of depression were nonsignificant (for fulfillment) or reduced (for framework) when entering positive indicators of life satisfaction, self-esteem, and general wellbeing. Of note, the Somatization subscale of Brief Symptoms Inventory (BSI; Derogatis, 1993) was not significantly associated with the LRI-R dimensions, though this study may have been underpowered for the analyses. Results from this study highlight the importance of including positive and negative wellness indicators in the study of MIL.

Another study evaluated the associations of meaning and life satisfaction across 27 nations (Park, Peterson, & Ruch, 2009). The authors measured meaning with the Orientations to Happiness Scale (Peterson, Park, & Seligman, 2005), which measures pleasure, engagement, and meaning according to Seligman's (2002) theory of happiness. The study was administered with online surveys in English to individuals (N = 24,836). They found that meaning significantly predicted satisfaction in life (r = .08). To test variance across nations, the authors conducted an analysis of variance predicting life satisfaction, which resulted in no significant interactions. This study included very small samples recruited from Latin American countries of Argentina (n = 27) and Brazil (n = 22). However, the authors concluded that associations between meaning orientations and life satisfaction were across all countries.

The association between MIL and life satisfaction has also been explored longitudinally (Steger & Kashdan, 2007). Using the Presence and Search for Meaning subscales of the MLQ to assess meaning, the authors evaluated the relationships in 82 college students. Bivariate correlations indicated a significant correlation between baseline MLQ-Presence and life satisfaction at one year (r = .30) and shared approximately 75% of the variance. However, when entering age and the three baseline variables (two MLQ scales and life satisfaction) only life satisfaction significantly predicted life satisfaction at one year. The authors suggested that these findings reflect the measure specificity strength of the MLQ and Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985) rather than not having a predictive relationship.

Somatic symptoms. The relationship between MIL and physical health can be traced back to Frankl's (1985) who, trained as a physician, observations that prisoners with high sense of meaning were more likely to survive concentration camps than those with low meaning in life. This observation has been evaluated recently primarily among medical populations. One study evaluated the effects of MIL (measured by MLQ) on general health and psychiatric symptoms in a sample of 99 patients enrolled in a smoking cessation program (Steger, Mann, Michels, & Cooper, 2009). Participants completed the measures in their third week of the program. Results indicated a significant bivariate correlation between presence of MIL and perceived health (r = .36). However, when entering various factors (age, search for meaning, presence of meaning, anxiety, depression, and social support) in a regression predicting perceived health, MIL was no longer significant. Instead, only age and depression significantly predicted perceived health. These findings support the need for evaluating wellness using various indicators (i.e., depression

and physical health). It also suggests that MIL has direct effects, but also indirect effects on physical health.

A handful of studies have evaluated the impact of meaning or purpose in life on biological markers. One study by Ryff and her colleagues (Ryff et al., 2006) evaluated purpose in life (among other components of her 1989 wellbeing model) and various biological indicators. The study administered self-reports and biological markers in women from the community (N = 135) ages 61 to 91 (M = 74). Results indicated that women who reported higher purpose in life have better cardiovascular indicators, including lower hip-to-waist ratios (r = -.17) and higher HDL cholesterol (r = .22) as well as neuroendocrine factors (lower salivatory cortisol, r = -.29, only for women age 75 and older).

Another study evaluated longitudinal effects of purpose in life on allostatic load, which evaluates different biological systems simultaneously rather than one system individually (Zilioli, Slachter, Ong, & Gruenwald, 2015). The study used national data (N = 1,054) from the Midlife in the United States of English-speaking adults ages 25 to 75. Data from Time 1 was from 1995-1996 and Time 2 was from 2004-2006. The final sample included 985 adults. Results indicated that purpose in life at Time 1 significantly and negatively predicted allostatic load at Time 2 even after controlling for age, educational levels, and Time 2 purpose in life. Interestingly, cross-sectional purpose in life and allostatic load was not significantly correlated, suggesting a stronger longitudinal relationship.

Krause (2004) evaluated the associations of MIL, stressors from roles, and physical health in a large sample (N = 1,353) of adults aged 65 and older. This study examined the negative effects of stressors in valued roles (e.g., spouse, parent, provider) on physical health; mediation effects of MIL were also examined. Results suggest that older adults' stressors that

emerge from roles negatively impact physical health by eroding one's subjective MIL. This deleterious trend in meaning is buffered by emotional support. This study suggests unique and shared effects of meaning in life and social support on older adults in light of specific stressors.

Meaning in Life among Latinos

Although past work has explored cultural differences in MIL, studies exploring MIL among Latinos have only emerged in the past decade. Working from a stress-and-coping perspective (Lazarus & Folkman, 1994), Dunn and O'Brien (2009) evaluated the effects of stress, social support, and religious coping on MIL and psychological health among Latino immigrants. The authors recruited immigrants from El Salvador and Guatemala living in the Washington, D.C. area (N = 179) and administered Spanish versions of the measures, which included the MLQ for MIL and the Brief Symptoms Inventory (BSI 18; Derogatis, 1993). Most of the measures used in this study were available in Spanish, though the authors conducted translation-back translation methods (Brislin, 1970, Marin & Marin, 1991) to ensure equivalence. Findings indicated that stress accounted for 31%, 38%, and 23% of the variance in depression, anxiety, and somatization, respectively; social support and religious coping variables did not explain additional variance above and beyond stress. Perceived stress predicted MLQ-Presence, and social support from a significant other partially mediated this relationship accounting for an additional 6% of the variance in MLQ-Presence. After controlling for stress and social support, religious coping variables did not significantly predict MLQ-Presence. Significant bivariate correlations were found between MLQ dimensions and distress symptoms (correlation coefficients were calculated using square root transformations). MLQ-Search was associated with BSI 18 scales of depression (r = .25) and anxiety (r = .20), but not somatization (r = .16). Unexpectedly, MLQ-Presence was not associated with depression, anxiety, or

somatization (*r*s = -.05, -.05, & -.15, respectively) though the correlation coefficient for somatization was larger than for the other two measures of distress. This study suggests possible cultural differences in the way MIL impacts psychological distress. It also underscores the importance of evaluating somatic symptoms in Latino immigrants. However, of MIL seems to be a relevant construct for psychological health of Latino immigrants.

Most recently, Vela and colleagues (Vela, Castro, Cavazos, Cavazos, & Gonzalez, 2015, Vela et al., 2014, Vela, Lu, Lenz, & Hinojosa, 2015) have explored MIL in Latino college samples working from a positive psychology framework. One study (Vela, Castro, et al., 2015) explored the effects of daily spirituality and MIL in predicting subjective happiness. Participants were 119 Latino college students recruited from a Hispanic-Serving Institution, where 90% student body was Mexican descent; 19% identified as first generation immigrants (born in Mexico), 59% second generation, 6% third generation, and 16% fourth generation and beyond. A multiple regression of MLQ scales, daily spirituality, and generation status on happiness was significant, and accounted for 16% (R^2 = .16) of the variance in happiness scores. Only MLQ-Presence and daily spirituality were significant predictors of happiness, with squared semipartial correlations suggesting that MLQ-Presence and daily spirituality accounting for 7% and 5% of unique variance in happiness scores, respectively.

In a similar study, Vela, Lu, and colleagues (2015) evaluated MIL, hope and *familismo* as predictors of psychological grit. *Familismo* is understood as the Latino value of family connectedness (i.e., identity, activities, and cohesion) that has been found to be associated with various aspects of wellbeing, including resilience. Participants were 128 Latino students enrolled in a HSI (12% first generation immigrant, 41% second generation status, 6% third generation, and 16% fourth generation and beyond). Results from multiple regression analyses

indicated that the overall model (including familismo, subjective happiness, MLQ scales, and hope) significantly predicted psychological grit, accounting for 35% of the variance in grit. In terms of individual variables, MLQ-Search and Hope, but not familismo, MLQ-Presence, and subjective happiness, significantly predicted psychological grit in Latino college students.

Another study evaluated MIL using the PIL among Latino college students from a Hispanic Serving Institution (Pirtle & Plata, 2008). The sample included 156 freshman students (immigrant generation status not assessed). Scores on the PIL by this sample were compared to scores from past studies primarily White, non-Latino college students (Boggs, 2007; Crumbaugh & Maholick, 1976). Results from a one-sample *t* test indicated that Latino college students reported higher levels of MIL than the comparison sample. Using the *t* test value and degrees of freedom indicated a small to medium effect size (Cohen's $d = .48$). Although it is arbitrary to establish cultural differences with one study, this finding suggests cultural influence of MIL among Latinos.

Summary of Meaning in Life

The empirical study of MIL has gained much traction in psychology in the last 25 years. This trend is due in part to social psychologists' writings (Baumeister, 1991), but also due to the study of psychological wellness (e.g., Ryff & Singer, 1998) and the subsequent emergence of positive psychology (Seligman, 1998). Several theoretical frameworks to understand how MIL impacts psychological functioning have been proposed, and MIL has consistently been found to be associated with depression, life satisfaction, and somatic symptoms in the literature. However, the extent to which these effects exist among Latino immigrants is unclear. For example, one study found non-significant links between MIL and wellbeing (Dunn & O'Brien 2009), whereas others have found significant correlations (Vela, Castro et al., 2015). Latinos

have also been found to report higher levels of MIL than European Americans (Pirtle & Plata, 2008). We believe attachment theory offers a useful theoretical framework for understanding individual differences in cognitive and motivational (e.g., state hope) as well as interpersonal (e.g., sense of belonging) elements to meaning in life.

Attachment Theory

Attachment theorists (e.g., Mikulincer & Shaver, 2013) have only recently begun to conceptualize MIL within attachment theory, though there is reason to believe attachment theory overlaps with the existing models described above in their understanding of MIL and wellness. For example, the attachment system is elicited under threatening situation, and past work has focused on the threat of meaninglessness and attachment security (Shaver & Mikulincer, 2012). The following sections will provide an overview of attachment theory, including a summary of attachment insecurity, wellness indicators, and MIL.

Attachment theory (Bowlby, 1969) has become one of the leading empirically grounded frameworks for understanding individual differences in psychological adjustment, emotional regulation, psychopathology, and health behaviors (see Cassidy & Shaver, 2008, for a review). According to the theory, the quality of emotional bonds developed between infants and their primary caregivers remain moderately stable into early adulthood (Fraley, 2002; Hamilton, 2000) and are believed to serve as guiding "internal working models" that influence close relationships in adulthood (Hazan & Shaver, 1994, p. 5). Through his clinical work with children and adolescents, John Bowlby (1969) attempted to understand the impact of mother-infant attachment relationships and the emotional distress that resulted from disruptions of those relationships.

Bowlby defined attachment as the infant's seeking closeness to his or her primary caregiver (e.g., mother). During infancy the caregiver is understood both as a *safe haven*, in which infants seek comfort when they perceive a threat or experience stress, and a *secure base*, from which the infant explores the environment. The attachment system is both evolutionarily necessary for the survival of the human species and biologically necessary for the development of the individual (Ainsworth & Bowlby, 1991). During a stressful situation (e.g., hunger) or threatening situation (e.g., separation), an infant would signify to or seek his or her care provider. In turn, the care provider responds and protects the young, thus increasing the likelihood of survival and reproductive success. As Bowlby predicted, the attachment system has been found to remain consistent into adulthood (Fraley, 2002; Hamilton, 2000). Attachment behaviors during adulthood might include seeking proximity or social support during stressful situations (e.g., Hazan & Zeifman, 1999). Alternatively, internalized representations of attachment relationships may be elicited to provide adults with emotional regulation (Mikulincer & Shaver, 2004).

Complementing Bowlby's theoretical framework, Mary Ainsworth developed the *Strange Situation* study to evaluate how 1-year-old infants responded to their mother's leaving them and returning to them (Ainsworth, Blehar, Waters, & Wall, 1978). Ainsworth found that most infants responded with a certain level of anxiety when their mothers left, were able to explore their surroundings with mothers' presence, and were easily comforted upon the return of their mothers; these were deemed to have *secure* attachment. A second group of infants were severely distressed when their mother left, showed little exploration, and were difficult to comfort upon their mother's return; this group was classified as *anxious-ambivalent*. The third

group showed little distress when their mothers left the room and avoided their mothers when they returned; this group was called the *anxious-avoidant* group.

Although Bowlby and Ainsworth focused on children's attachment to caregivers, attachment research was later extended into close relationships in adolescence and adulthood. Hazan and Shaver (1987) cited Bowlby (1979) stating that "attachment behavior [characterizes] human beings from the cradle to the grave" (p. 511). Building on Ainsworth's empirical findings of attachment typologies and Bowlby's (1980) concept of internal working models, researchers have made significant strides in expanding the theory of attachment into adulthood. Hazan and Shaver (1987) were the first to articulate that attachment in adulthood would be expressed through romantic relationships as well as internalized parental attachments. Thus relationship patterns developed during childhood would extend into one's romantic relationship as adults. They developed a brief measure consisting of three vignettes corresponding with Ainsworth et al.'s (1978) three categories of attachment: secure, avoidant, and anxious-ambivalent. Results indicated that each of the attachment styles were uniquely associated with various relationship styles as well as self-reported loneliness (i.e., individuals with secure attachment reported the least levels of loneliness, followed by avoidant attachment, and anxious-ambivalent attachment). In addition, individuals with secure attachment reported greater friendship experiences and were less likely to experience a fear of closeness and emotional extremes compared to adults with insecure attachment.

Attachment researchers continued expanded the adult attachment framework in the next few years. Bartholomew and Horowitz's (1991) adopted Hazan & Shaver's (1987) self-reported vignettes and expanded the three categories into a four-category typology of adult attachment. In their typology, secure and preoccupied attachment correspond with secure and anxious-

ambivalent attachment, respectively, whereas, fearful and dismissing consist of two distinct types of avoidant attachment. Bartholomew and Horowitz argued that attachment styles correspond to two continuous dimensions: model of self and model of others. The four categories could be understood as having positive or negative *internal working models* (or views) of self and others. Thus, individuals with secure attachment have a positive view of both self and others; individuals with preoccupied attachment have a negative view of self and a positive view of others; dismissing, a positive view of self and a negative view of others; and fearful, a negative view self and others. Bartholomew and Horowitz (1991) found convergent validity through unique correlations with various interpersonal problems. Specifically, fearful attachment was associated with overly passive interpersonal problems, dismissing attachment was associated with a lack of warmth in social interactions, and preoccupied attachment was associated with interpersonal problems of warmth and dominance (i.e., depending on others for self-worth and doing so by controlling means).

Toward the late 1990s nearly 60 measures or subscales (and 323 non-redundant items) had emerged to test attachment in adults when Brennan, Clark, and Shaver (1998) developed the Experiences in Close Relationships Scale (ECRS). A factor analysis revealed two primary factors, avoidant attachment ($\alpha = .94$) and anxious attachment ($\alpha = .91$) that explained 62.8% of the variance in 36 items selected from the 60 scales. Each subscale included 18 items corresponding to each dimension. A small correlation was found between the two factors ($r = .12$), suggesting they were orthogonal. This two-dimensional solution was consistent with Bartholomew and Horowitz's (1991) model of attachment instead of the three-category typology of Hazan and Shaver (1987). Since then, the ECRS has become the most widely used measure of adult attachment. The two dimensions can be understood in terms of the affective response

(Anxiety) and behavioral responses (Avoidance) to close relationships or the internal working models of self and others (Crowell, Fraley, & Shaver, 2008).

Attachment and Wellness

These attachment dimensions (Anxiety and Avoidance) have been theoretically and empirically linked with various constructs of psychological and physical functioning. In fact, Bowlby (1980) wrote about the effects of attachment insecurity as a risk factor for developing depression and physical symptoms in response to mourning and loss. Since then research has provide clear support to that both Anxiety and Avoidance are associated with various wellness indicators, including depressive symptoms, life satisfaction, and somatic symptoms. The following section reviews selected empirical findings.

Depression. Bowlby (1980) first conceptualized that loss of attachment security (real or symbolic) during childhood poses a risk factor for developing clinical depression later in life. Though classical psychoanalysts had understood depression as resulting from pathological mourning (Freud, 1957), Bowlby took a different approach based on research at the time. Consistent with a cognitive understanding of depression (e.g., Beck, 1976), Bowlby suggested that emotions and cognitions developed in childhood contribute to depression, especially under stressful circumstances. Although he wrote about attachment and depression in adulthood, empirical work on this link did not emerge until the 1990s. Early studies evaluated how attachment dimensions relate to specific features of depression. For example, Zuroff, and Fitzpatrick (1995) evaluated whether attachment orientations were more closely associated particular features of depression (i.e., dependency, self-criticism, sociotropy, and autonomy) among 149 undergraduate students. Results indicated that aspects of depression were significantly correlated with both Anxiety and Avoidance, but the direction and strength of the

correlations varied across attachment dimensions. Anxiety was positively correlated with all four personality features, whereas Avoidance was negatively correlated with dependency and sociotropy (investment in positive interpersonal exchanges) and positively associated with self-criticism and autonomy. Additionally, correlation coefficients were larger for Anxiety than Avoidance on all personality styles except autonomy. These correlations remained significant even after controlling for BDI scores. Findings suggest that depression may be more strongly associated with Anxiety than Avoidance, which is consistent with subsequent research (see Mikulincer & Shaver, 2007, Chapter 13 for a review), though features of depression are conceptually and empirically related to both dimensions.

A more recent study evaluated the direct and indirect effects of insecure attachment dimensions, social self-efficacy, self-disclosure, loneliness, and depression (Wei, Russel, & Zakalik, 2005). In particular, they tested whether attachment anxiety and avoidance predicted loneliness and subsequently depression via two Tier 1 mediators: social self-efficacy (for Anxiety) and self-disclosure (for Avoidance). Participants included 308 freshman-level college students at a large university who completed online survey. Attachment insecurity dimensions of Anxiety and Avoidance were measured using the ECRS. Depression was measured at time 1 (October of freshman year) and time 2 (March of freshman year) using the Center for Epidemiological Studies—Depression Scale (CES-D; Kohout, Berkman, Evans, & Cornoni-Huntley, 1993). Results indicated good model fit using SEM when including depression (time 1) as an exogenous variable. In particular, Anxiety and both Tier 1 mediators explained 55% in loneliness scores. Depression (time 1) and loneliness explained 42% of the variance in depression (time 2). Findings suggest that the attachment insecurity predicts depression symptoms through specific interpersonal and intrapersonal pathways, particularly loneliness.

Past studies have also explored attachment insecurity and depression in community samples with more rigorous measures. One such study examined attachment using an interview measure, Attachment Style Interview (Bifulco et al. 1998) to assess both adult attachment and depression in an at-risk community and control sample from north London (Bifulco, Moran, Ball, & Lillie, 2002). Participants were 104 at-risk mothers (problematic close relationships or low self-esteem) and 118 women with childhood neglect or abuse. Researchers used biological siblings (sisters) for their control sample (n = 80). Results from logistical regression analyses indicated that insecure attachment and poor support were the strongest predictors for clinical depression. Notably, however non-standard withdrawn attachment (closely related to avoidant attachment) was not related to depression.

In their review adult attachment and mood disorders, Mikulincer & Shaver (2007, Chapter 13) identified over 100 studies in nonclinical populations. They reported that attachment security was consistently related to lower levels of depression across studies using self-report measures of attachment. In addition, attachment anxiety (measured both dimensional and categorical) was associated with higher levels of depression across all studies. However, the findings of attachment avoidance was less consistent. Only half of the studies found that adults with avoidant attachment experience greater depression than individuals with secure attachment. When evaluating attachment with a dimensional measure, nearly 76% of studies reported significant positive correlations between Avoidance and depression.

Life satisfaction. Life satisfaction is one outcome measure that evaluates hedonic psychological wellness. Past work has evaluated the negative effects of attachment insecurity dimensions on life satisfaction, though to a lesser extent than with depression. One study evaluated attachment dimensions in both positive (life satisfaction) and negative (depression)

wellness indicators (Gnilka, Ashby, & Noble, 2013). This study tested the negative effects of adult attachment insecurity (ECRS-Revised; Fraley, Waller, & Brennan, 2000) on life satisfaction (SWLS), depression (Kandel Depression Scale; Kandel & Davies, 1982), and hopelessness; the mediating effect of perfectionism was also tested. Participants included 180 undergraduate students. Results indicated significant correlations between attachment dimensions with depression and life satisfaction in the expected direction. Correlation coefficients of the attachment-depression link were larger for Anxiety (r = .37) than Avoidance (r = .17); the reverse was true for life satisfaction, with stronger coefficients for Avoidance (r = -.32) than Anxiety (r = -.27). Moreover, all relationships between attachment and wellbeing were partially mediated by maladaptive perfectionism; adaptive perfectionism was a partial mediator for Avoidance-life satisfaction, but not the other relationships.

Consistent with Bowlby's theory, Hinnen, Sanderman, and Sprangers (2009) examined adult attachment as a mediator between childhood recollections of negative events (e.g., separation and loss, interpersonal traumas, parental psychopathology, and parents' relationship conflicts) and life satisfaction. Participants included a sample of 437 community individuals from the Netherlands who completed an online survey. Participants completed the ECR-R, a 3-item measure for life satisfaction, and three measures that assessed family context, parenting, and childhood adversities. Results indicated that adult attachment security was significantly correlated with family warmth, harmony, and parental support, whereas attachment insecurity was related to adverse childhood events. Moreover, individuals with secure attachment were more satisfied with their lives than those with insecure attachment. Findings from this study suggest that attachment style and interpersonal support from family members have direct and indirect effects on life satisfaction as adults.

Another study evaluated the attachment and life satisfaction from the perspective of vocational psychology (Wright & Perrone, 2010). This study evaluated the mediating effect of social self-efficacy and career decision making self-efficacy on the attachment-life satisfaction link. Researchers used two self-report measures for attachment, the ECRS-R and Adult Attachment Questionnaire (Simpson, Rholes, & Phillips, 1996) to measure one latent attachment variable. Findings from the SEM indicated that both a full mediation model and alternative, partial mediation model demonstrated adequate model fit. However, the direct path from attachment to life satisfaction was significant (beta = .47), and authors argued that the partial mediation was closer to the conceptualization of attachment and life satisfaction. This study indicated that attachment and high self-attribution of career decision making predicted life satisfaction, though it did not report the overall variance accounted for in life satisfaction. This study also aggregated attachment insecurity dimensions together, which may mask the unique effects of each attachment dimension on wellness.

One of the few studies that evaluated attachment theory and positive psychology variables explored various strengths as mediators between attachment and life satisfaction (Lavy & Littman-Ovadia, 2011). Participants were 394 college students who completed a paper-and-pencil survey (n = 240) and online survey (n = 154). The study used the ECRS and SWLS to measure attachment and life satisfaction, respectively. Participants also completed a survey of strengths based on Peterson and Seligman's (2004) taxonomy of 24 strengths. Results indicated that both Avoidance (r = -.25) and Anxiety (r = -.20) were significantly and negatively correlated to life satisfaction. The relationship between Avoidance and life satisfaction was fully mediated by hope, love, gratitude, and zest. The relationship between Anxiety and life satisfaction was partially mediated by hope, perspective, and curiosity. Results from this study suggest that hope,

which is conceptually and empirically associated with MIL, is relevant for attachment theory and wellness.

Somatization. The line of research regarding the effects of attachment on somatization is more recent, though Bowlby (1980) suspected that insecure attachment would have effects on physical health. Somatic symptoms may be more culturally appropriate to express than psychological symptoms for Latino immigrants and research suggests that somatic concerns predict depression and anxiety in this population (Escobar et al., 2010). Thus, somatization may be an especially important indicator of wellness for Latino immigrants. In their model on attachment and somatization, Chiechanowski, Walker, Katon, and Russo (2002) proposed that attachment informs cognitive schemas—including symptom perception and effectiveness health-care—that contribute directly to somatization and health care use. They recruited female primary care patients (N = 701), evaluating their attachment style, somatic symptoms and health-care use, and medical issues. Findings indicated that individuals with preoccupied and fearful attachment reported more physical symptoms than individuals with secure attachment; no significant difference was found between secure and dismissing patients. Individuals with preoccupied had the highest attachment health-care use compared to the other attachment styles and those with fearful attachment had the lowest health-care use.

Another study used dimensional measure of attachment using the ECRS among 201 female college students (Wearden, Cook, & Vaughan-Jones, 2003). The study found significant correlations between Avoidance and Anxiety with somatic symptoms (rs = .24 and .20, respectively). They also found that alexithymia and negative affect partially mediated the effects of Avoidance on physical symptoms: Avoidance predicted higher alexythimia and negative affect, which subsequently were associated with symptom reporting. A similar study

replicated these findings in a community sample (N = 202) of individuals with varied levels educational background (Armitage & Harris, 2006). This study found that secure, avoidant, and anxious/ambivalent attachment, measured by Hazan and Shaver's (1987) vignettes, were significantly related to symptom reporting (rs = -.28, .18, .18, respectively). Using path analysis, they also found that the relationship between secure attachment and the amount of reported symptoms was partially mediated by negative affect. These findings suggest affective pathways through which attachment style influence symptom reporting.

In another study, Liu, Cohen, Schulz, and Waldinger (2011) explored the relationship between attachment, anger expression, and somatic complaints. Participants included a community sample (N = 101) recruited from a large city in the U.S. Participants completed surveys that included the Relationships Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994) to measure attachment. Analyses were run separately for men and women. Correlations between attachment style and somatic complaints varied across gender: secure attachment was significantly correlated to somatic complaints among men and women (r = -.28), fearful attachment was also significantly correlated for men (r = .36) and women (r = .39). However, preoccupied was significantly correlated to somatic complaints for women (r = .20), but not men (r = -.06); conversely, dismissing was significantly correlated to somatic complaints for men (r = .23), but not women (r = .07). Consistently, anger expression mediated the attachment-somatic complaints link for men, whereas anger suppression mediated this link for women. Taken together, these studies suggest that individual differences in attachment contribute to somatic complaints, though this relationship may vary across cultural practices of affect expression and the specific mechanisms through which attachment affects somatic symptoms remain unclear.

The link between attachment and somatization has most recently been explored among Latinos (Wang, Scalise, Barajas-Munoz, Julio, & Gomez, 2016). This study examined the somatic complaints from adult attachment and acculturation perspectives in a sample of Latino college students (N = 160). In their SEM model, the negative effects of attachment orientations (using the ECRS) on acculturative stress (perceived discrimination and somatic complaints) were mediated by acculturation and Latino cultural beliefs (familismo and gender role indicators). Their model had good fit: $\chi^2(9) = 8.01$, SRMR = .03, CFI = 1.00, GFI = .98, Adjusted GFI = .96, RMSEA = .00 (90% CI = .00-.08), and resulted in a medium effect size on somatic complaints (accounting for 17% of the variance). Anxiety had significant direct effect on somatic complaints (β = .37), but Avoidance did not (β = -.14). Perceived discrimination also had a significant direct effect on somatic complaints (β = .14). Indirect effects were also identified for attachment dimensions on discrimination by way of acculturation and Latino culture variables.

Attachment and Meaning in Life

Attachment theory has only recently been used to understand MIL. Mikulincer and Shaver (2013) articulated possible pathways though which attachment orientations might impact subjective meaning in life. They argue that the threat of meaninglessness—a threatening stimulus—is likely to trigger the attachment system, leading individuals to engage in support-seeking behaviors for secure individuals. Those with insecure attachment may use more maladaptive coping and emotional regulation strategies. Specifically, individuals with anxious attachment may be more likely to engage in *hyperactivating* (excessive attempts to seek social support), whereas those with avoidant attachment may engage in *deactivating* (distancing oneself from threatening stimuli and close others). Mikulincer and Shaver also propose specific pathways through which attachment behaviors impact subjective MIL: sense of purpose,

personal identity, and philosophy and faith. Insecure attachment orientations and their respective styles are likely to interfere with setting realistic goals, developing a coherent identity, and experiencing intrinsic religiosity, all of which contribute to experiencing decreased subjective MIL. Pathways one and two (sense of purpose and personal identity) are particularly relevant to state hope and sense of belongingness. Studies that empirically examined the conceptual associations between attachment and MIL are reviewed in the next section, followed by empirical and theoretical rationales for these pathways as mediators between attachment and MIL.

One study evaluated the effects of insecure attachment (using the ECRS) on MLQ-Presence and MLQ-Search, with mediating effects of authenticity variables (Lopez, Ramos, Nisenbaum, Thind, & Ortiz-Rodriguez, 2015). Participants in their study were ethnically diverse college students (N = 100; 27 Caucasian, 30 Asian, 17 Hispanic, 17 Black, 9 other/no response). Results indicated that Anxiety, but not Avoidance was negatively correlated with MLQ-Presence and positively correlated with MLQ-Search (rs = -.38, .24, respectively). Hierarchical multiple regression analyses indicated full mediation effects of the authenticity variables (authentic living, accepting external influence, self-alienation) on the association between Anxiety and MLQ scales. In the final model of separate regressions conducted for both MLQ-Presence and MLQ-Search, only self-alienation remained as a significant predictor of MLQ.

In another study, researchers explored the relationship between attachment and MIL in the context of caregiving behaviors (Reizer, Dahan, & Shaver, 2013). Participants included 313 Israeli adults, 59% of whom were married or cohabitating, and they completed the ECRS, MLQ, and a measure that tapped into caregiving activation and deactivation. This study evaluated the moderating effect of attachment on the caregiving-MIL association. Both Anxiety and

Avoidance were associated with lower MLQ-Presence (*r*s = -.35, -.24, respectively). Anxiety, but not Avoidance, was associated with higher MLQ-Search (*r*s = .35, .06, respectively). Moreover, Anxiety moderated the negative association of caregiving deactivation on lower MLQ-Presence. Though promising findings, the design in this study could have been stronger, since conceptually adult attachment would predict caregiving behaviors on MIL variables.

To explore the developmental trajectory of attachment and MIL, Bodner, Bergman, and Cohen-Fridel (2014) evaluated this link across three adult age groups. Participants included 365 young adults (ages 21-30 years), 339 established adults (31-49), and 228 older Israeli adults (50-65). This study measured attachment categories with the ECRS and meaning with the MLQ. Results from multivariate analysis of variance (MANOVA) indicated a main effect for attachment on the MLQ-Presence. Specifically, securely attached individuals scored the highest, followed by dismissive, and preoccupied and fearful (no difference between the latter two). In terms of MLQ-Search, individuals with fearful and preoccupied attachment reported the highest, followed by secure and dismissive attachment. A main effect for age indicated a positive trend for MLQ-Presence, with older adults reporting the highest levels, followed by established adults and then young adults. Younger adults reported higher levels of MLQ-Presence than older and established adults. Interaction effects indicated that those with dismissive attachment reported lowest levels of MLQ-Search for younger and established adults. Results support lifespan trajectory of MIL (e.g., Steger et al., 2009) and suggest unique and shared contributions of attachment and age on MIL.

Yen (2014) evaluated the mediating effects of MIL on the association between attachment and life satisfaction. This article included two studies that measured attachment with the ECRS, meaning with the PIL, and life satisfaction with SWLS across two college samples (*N*

= 150, 234, respectively). Results indicated that Anxiety and Avoidance negatively predict PIL and SWLS. Moreover, a full mediating effect was found for PIL on the relationship between attachment and life satisfaction, accounting 10% and 20% of the variance in life satisfaction (ΔR^2 = .10 to .20).

Attachment among Latinos

In light of the controversy on the universality of attachment theory, empirical studies in adult attachment across cultures have emerged over the past decade. Despite this, relatively few cross-ethnic/racial or cross-national studies have examined Latinos/Hispanic populations in comparison with U.S. or Caucasian samples. A thorough search through the literature revealed only four cross-ethnic studies within the U.S. and two cross-national studies comparing attachment between Mexican and U.S. samples. Table 1 presents summary of five of these studies with effect sizes of differences in attachment (one study that compared a sample from Spain to participants from the U.S. was not included for the focus of this study is Latino Americans). In one study, Lopez et al. (2000) examined adult romantic attachment with the AAQ (Simpson, 1990) and parental attachment with the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979) among African American, Latinos/Hispanic American, and Caucasian college students. In terms of parental attachment, African Americans reported significantly more maternal overprotection than Caucasian students. No differences in attachment anxiety were found across the three groups; however, Latino/Hispanic American and African American students reported greater attachment avoidance than Caucasian students.

In another study examined adult attachment in Mexican American and non-Hispanic White college women (Tacón & Caldera, 2001). Using a Hazan and Shaver's (1987) vignettes, the authors found a similar distribution of attachment styles in Mexican American women

(63.5%, 16%, and 13.5%) and in non-Hispanic White women (59.3%, 2.3%, and 15.3%) for secure, avoidant, and ambivalent styles, respectively. The authors also compared group means of Close, Depend, and Anxiety attachment dimensions from the Adult Attachment Survey (Collins & Read, 1990) and found no differences between Mexican American and non-Hispanic White women. These results suggest that adult attachment patterns may be similar in Latina/Hispanic American and Caucasian female college students.

Table 1

Studies Reporting Adult Attachment among Latinos in the U.S. (Effect Sizes of Mean Difference with Caucasian Sample)

Study	Sample	Sample size		Measure	Primary Findings	
		Latino	White		Avoidance	Anxiety
Lopez et al. (2000)	Hispanic American	89	329	AAQ	Latino > Cauc. Cohen's d = .45	Latino > Cauc. Cohen's d = .07
Tacón & Caldera (2001)	Mexican-American (women)	96	59	AAS	Latino = 16% Cauc. = 20% χ^2, p = *ns*	Latino = 14% Cauc. = 15% χ^2, p = *ns*
Wei et al. (2004)	Hispanic American	163	296	ECRS	Latino > Cauc. Cohen's d = .14	Latino > Cauc. Cohen's d = .17
Friedman et al. (2010)	Mexico & U.S.	200	214	ECRS	Mexico > U.S. Cohen's d = .53	Mexico > U.S. Cohen's d = .13
Shelton & Wang (in press)	Latinos	184	459	ECRS-Spanish	Latino > Cauc. Cohen's d = .33	Latino = Cauc. Cohen's d = .06

Wei, Russell, Mallinckrodt, & Zakalik (2004) examined attachment patterns in Caucasian, African American, Asian American, and Latino/Hispanic college students and found that the factor structure of the ECRS did not vary across four groups. This suggests that the construct of attachment as measured by the ECRS shares similar factor structure across these four ethnic groups. Asian Americans scored significantly higher on anxiety than Caucasian

college students; for Latinos this difference approached significance (p = .051). Asian Americans and African Americans scored higher on avoidance than their Caucasian peers. In addition, the authors examined whether structural paths of attachment to mood were equivalent among all four groups. They found that anxiety was associated with negative mood in all four groups, but that this association was stronger in Asian Americans than African American and Caucasian college students. The path from attachment anxiety to negative mood was invariant across all four groups.

Another study evaluated psychometric properties of a modified Spanish version of the ECRS (Alonso-Arbiol, Balluerka, & Shaver, 2007) among Latino college students (Shelton & Wang, in press). Bilingual Latino college students (n = 183) recruited from a large public university completed a dual-language split half version of the ECRS (half English, half Spanish). Results from the EFA revealed a two-factor solution with 35 items accounting for 40% of the variance. Reliability, convergent validity, and discriminant validity were also supported, suggesting that the construct of attachment is valid among Spanish-speaking Latinos. However, factorial and reliability coefficients were not perfectly equivalent, and hypothesized association between avoidance and trust was not supported, suggesting some cultural variations in the expression of adult attachment among Latinos.

Given that the majority of Latino immigrants proceed from Mexico and may experience a strong sense of Mexican cultural identity, the following cross-national studies inform understanding of attachment similarities and differences between Mexico and the U.S samples. Schmitt et al. (2004) conducted a multinational study across 62 "cultural regions," including Spain as well as 6 Latin American countries. Participants (N = 17,804) completed the RQ measure of attachment, measures of self-esteem and agreeableness (from the *Big Five Inventory;*

Benet-Martínez & John, 1998), as well as socio-cultural indices (e.g., fertility rate, Gross Domestic Product, and national profiles of individualism vs. collectivism). Schmitt et al. found that in most cultural regions secure romantic attachment was normative (i.e., higher rates of secure attachment than other styles). Although the authors did not discuss findings based on specific Spanish-speaking countries, visual inspection of rates of different attachment styles in individual countries revealed a similar pattern to the rates of Western countries. Using means and standard deviations reported in the study, effect sizes of the differences between the U.S. and Mexican samples in various RQ attachment styles were calculated by the authors and these differences are reported in Table 2. Their findings also suggested that the two-dimension structure as measured by the RQ has both convergent validity and discriminant validity. Specifically, in most cultures the model of self was positively associated with self-esteem and was not associated with agreeableness; the opposite occurred with the model of other, in that it was positively associated with agreeableness and was not associated with self-esteem. The authors also found that socio-cultural indices were associated with romantic attachment styles.

Table 2

Differences in RQ Rates of Attachment Comparing Samples from U.S. with Samples from Mexico (Schmitt et al., 2004)

Countries	Secure	Dismissing	Preoccupied	Fearful
Mexico & U.S.	Mexico < U.S. Cohen's d = .36	Mexico > U.S. Cohen's d = .03	Mexico < U.S. Cohen's d = .09	Mexico < U.S. Cohen's d = .31

Note. This study also included five other Spanish-speaking counties (Spain, Peru, Bolivia, Chile, & Argentina), not included on this table. Participants were: Mexico (n = 273) & U.S. (n = 2481)

Friedman et al. (2010) examined attachment and relationship satisfaction in U.S., Mexico, and Hong Kong. Participants were all university students, currently involved in a

relationship for at least 3 months and included 214, 153, and 200 participants for the U.S, Hong Kong, and Mexican samples, respectively. Attachment avoidance was significantly higher in Mexico and Hong Kong compared with the U.S. sample; attachment anxiety was higher in Hong Kong than in the U.S., but no difference was found in attachment anxiety between the Mexico and U.S. participants. As predicted, both attachment avoidance and anxiety were associated with negative relationship outcomes although the association between attachment avoidance and relationship indicators was stronger in both collectivistic cultures than in the U.S. Researchers also found that the relationship between attachment anxiety and negative relationship outcomes was stronger in collectivist countries than in the U.S., though these results were less consistent. For example, the anxiety-relationship satisfaction association was stronger in Hong Kong and Mexico than in the United States, whereas links between attachment anxiety and perceptions of partner support and levels of relationship conflict were stronger in Mexico than in the United States, but they were not stronger in Hong Kong.

Summary of Attachment

Attachment theory was originally conceptualized as being a universal theory. The evidence seems to support this notion for Latinos, since factor structure and associations with relevant constructs seem to hold among Latino samples. Moreover, attachment theory provides a unique framework for understanding individual differences in wellness and MIL. Past work has consistently found insecure attachment to be correlated with lower levels of MIL and poorer wellness. In terms of MIL, insecure attachment orientations have been associated with lower presence of MIL, and this correlation remains consistent across different age groups. This link has been more consistently found for Anxiety than Avoidance. Moreover, the mediating effects of MIL have also been found on the attachment-life satisfaction link.

In terms of wellness indicators, Anxiety and Avoidance have been found to predict higher depression, lower life satisfaction, and more somatic symptoms. However, the strength of the relationship tends to vary according to the outcome variables. For example, negative effects for depression and somatic complaints tend to be stronger for Anxiety than Avoidance, but the reverse has been found for life satisfaction. Moreover, several moderating and mediating variables have been identified in the literature for the effects of insecure attachment on wellbeing outcomes. Poorer social support and loneliness functioned as mediators for depression; hope (and other virtues) functioned as a mediator for life satisfaction; and cultural variables (acculturation and enculturation) for somatic complaints. These findings lend support to our current conceptualization of the mediating roles of belongingness and state hope on the attachment-wellness relations.

Sense of Belonging

Psychology has been concerned with the basic need to form and maintain interpersonal relationships since its inception. Interpersonal needs were described as early as Freud (1930), though he theorized that the drives of sexuality and aggression were primary motivators. Maslow (1968) placed belongingness in his hierarchy of needs after other basic needs were satisfied. Many other theorists proposed belongingness as an important element, though it was not until the 1990s that researchers proposed testable theories of the sense of belongingness. For example, Baumeister and Leary (1995) conceptualized belongingness from a motivation perspective. They argue that the need to develop interpersonal bonds is an innate, basic human need, and experiencing belongingness is likely to have positive effects on health and wellbeing. The theory posits that the need to belong motivates people to experience frequent contact with another person and to perceive stability and continuity in the relationship. Though similar to the

construct of adult attachment (e.g., Hazan & Shaver, 1994), the authors note two key differences. First, attachment theory focuses on individual differences of attachment style, whereas Baumeister and Leary highlight belongingness as a single, universal need to belong. A second difference is that attachment theory distinguishes the uniqueness among different prominent one-on-one relationships (e.g., romantic attachment, parent-child attachment), whereas belongingness is a need that is often met via an individual-to-group format.

Another theory for belongingness is informed by self psychology. Kohut (1984) proposed that the self is the organizing center for three needs—the need for grandiosity, idealization, and belongingness—which motivate the individual toward self-expression. Kohut (1971, 1977) articulated how children and adults satisfy their needs for idealization (children seek an omnipotent parent; adults pursue ideals and goals) and grandiosity (children seek attention from parents; adults pursue ambitions and desire for accomplishment), but did not elaborate on the need for belongingness. Lee and Robbins (1995) argue that people attempt to satisfy their needs for belongingness to reduce feelings of loneliness and isolation. Their conceptualization of belongingness is developmental in nature and is composed of companionship, affiliation, and connectedness. Companionship is developed early in life based on the infant's relationship to his or her caregiver, but extends into one-on-one relationships in later life. Companionship provides security and forms the basis of self-esteem. Affiliation (or the need for twinship) develops when children form peer relationships with similar others; self-esteem is strengthened with affiliation and children extend themselves beyond the parental figure. Connectedness develops in adolescence and emerging adulthood and refers to the sense of comfort among different others and within the larger society. Kohut (1984) referred to connectedness as the awareness of being "human among humans" (p. 200). The similarities

between attachment theory and Kohut's belongingness are striking given that they are both developmental models of interpersonal relationships. However, as Lee and Robbins argue, the attachment bond is conceptually similar to companionship, but not the other two domains.

Given that belongingness theoretically contributes to psychosocial functioning and wellbeing, Lee and Robbins developed a measure to explore these tenants empirically. The authors set out to validate an instrument that captures the three belongingness needs (companionship, affiliation, and connectedness). An EFA on 45 items (15 items each need) resulted in a 16-item two-factor structure that explained 38% of the variance in scores. The factor structure did not support the model of three belongingness needs. Instead, the two factors were Social Connectedness (sense of belonging) and Social Assurance (confidence in social situations), and contained items from mostly affiliation and connectedness, except one companionship item loading onto the Social Connectedness factor. The measure and construct of belongingness in general (and social connectedness in particular) lends itself to research contextual variables on psychological wellbeing, and has been found to contribute to wellbeing among immigrant populations (e.g., Yoon & Lee, 2010).

Drawing from the Social Connectedness Scale Yoon, Jung, Lee, and Felix-Mora (2012) developed an instrument that evaluates belongingness focused on minority individuals in the context of cultural belongingness. Their measure includes two subscales: Social Connectedness in Mainstream Society (SCMN) and Social Connectedness in Ethnic Community (SCETH). They found support for reliability and validity of both subscales using samples of Mexican American college students (n = 200) and of Asian international students (n = 134). Results from a confirmatory factor analysis indicated good model fit for the correlated two-factor model: $\chi^2(34) = 87.36$, CFI = .98, SRMR = .05, RMSEA = .09 (90% CI = .07-.11). Convergent and

discriminant validity was established by demonstrating significant correlations among the Social Connectedness Scale and measures of acculturation and enculturation. Multiple regression analyses indicated that—controlling for demographic variables, SCS, acculturation, enculturation, and ethnic identity—SCMN significantly and positively predicted life satisfaction and SCETH significantly and negatively predicted negative affect. This study suggests that these measures are appropriate among a group of Mexican American college students. Moreover, SCMN and SCETH seem to have unique protective effects on psychological wellness among Latino college students.

With the exception of Yoon and colleagues' (2012) measurement validation, research on sense of belonging among Latinos has primarily surrounded belongingness in an academic institution (e.g., Nuñez, 2009), which tends to emphasize academic rather than psychological effects of belongingness. However, the present study focuses on general sense of belonging as well as belongingness to the local-mainstream and Latino communities. Moreover, cultural belongingness seems to be particularly relevant to immigrants from other ethnic groups. For example, research using the SCMN and SCETH found these constructs mediate the relationship between acculturation and enculturation on wellbeing for 188 Korean immigrants (Yoon, Lee, & Goh, 2008). Therefore, we expect that having a sense of belonging will contribute to wellness among Latino immigrants.

Sense of Belonging as Mediator of Attachment-Meaning in Life

In the present study we propose that insecure attachment orientations (anxiety and avoidance) are likely to predict lower MIL and poorer wellness partially via the path of decreased sense of belonging. Having a sense of belonging could enhance one's internal security from social relationships—a central tenant to attachment theory. It seems as if belongingness

may be particularly important for Latino immigrants' formation of meaning and psychological wellbeing given value of *familismo* and collectivistic cultural orientations. In the current study, we operationalize the construct of belongingness as general belongingness (to family, others) and having a sense of connectedness with the local community as well as with one's immigrant community.

Attachment → sense of belonging. Only few studies have evaluated the link between attachment and belongingness and they appeared to be based on different theories to understand the drive for relationships, though Baumeister and Leary (1995) suggest that these concepts are a matter of emphases or approach rather than fundamental differences in theory. One study explored a developmental hypothesis of parent-child attachment and sense of belonging (Hagerty, Williams, & Oe, 2002). This study evaluated the role of parent-child attachment (i.e., maternal and paternal care and overprotection) and childhood/adolescent adversities (e.g., financial problems, substance use) on sense of belonging (Sense of Belongingness Inventory, SOBI; Hagerty & Patusky, 1995). Participants were community college students (n = 362; 35% identified as an ethnic/racial minority). Results from multiple regression analyses indicated that high maternal and paternal care and low paternal overprotection significantly predicted a higher sense of belonging among college students, accounting for 25% of the variance in belongingness. Though this study was cross-sectional, it suggests a developmental trajectory linking parental attachment and sense of belongingness.

Similarly, Chipuer (2001) evaluated attachment and belongingness on children's loneliness. A sample of 187 fifth and sixth graders from Australia completed measures of attachment (parent and peer), belongingness (to school and neighborhood) and loneliness (global, school and neighborhood, and emotional and social). A series of regression analyses

were evaluated to examine effects of attachment and belongingness on loneliness (separate regressions were conducted for each loneliness variable, while controlling for other measures of loneliness in step 1). Results indicated that peer attachment (but not parental attachment) was a significant predictor for emotional (β = -.22) and social loneliness (β = -.15). Neighborhood and school belongingness uniquely predicted neighborhood and school loneliness, respectively, above and beyond other connectedness and attachment variables.

Another study evaluated the direct and indirect effects of insecure attachment, belongingness, and social support on abuse behaviors (Rankin, Saunders, & Williams, 2000). Participants in this study were 69 African American men who had been arrested for relationship violence. Bivariate correlations revealed significant, negative associations between sense of belongingness (using the SOBI) and insecure attachment styles with correlation coefficients ranging between -.44 and -.57. This finding suggests an overlap, but not redundancy, of attachment and belongingness constructs. Path analysis results indicated that the negative effects of insecure attachment on depression symptoms and severity of abusive behaviors (e.g., physical, sexual) were fully mediated by sense of belonging and social support.

Two experimental studies also explored the role of attachment insecurity on belongingness. One study evaluated the effects of attachment avoidance (using the ECRS-R) and nostalgia on social connectedness (Wildschut, Sedikides, Routledge, Ardnt, & Cordano, 2010). The authors argued that nostalgia is a form of bolstering social connectedness by remembering close relationships. Individuals with attachment avoidance tend not to rely on close others to regulate distress (i.e., fear of intimacy), so this study examined if individuals with low avoidance would be more likely to use nostalgia and report higher social connectedness than those with high avoidance. They found that loneliness led to nostalgia, but only for individuals

with low levels of avoidance (compared to high avoidance) and that individuals with low avoidance (compared to high avoidance) reported greater social connectedness from nostalgia. These results suggest that attachment security plays a role on social connectedness.

Another article evaluated the role of dismissing attachment and experimental conditions of belongingness on positive affect and self-esteem in two studies (Carvallo & Gabriel, 2006). In Study 1, participants (n = 131 college students) who rated higher dismissing avoidance (using a single-item measure by Bartholomew & Horowitz, 1991) reported higher self-esteem and positive affect after learning that other participants liked them. In Study 2, participants (n = 115 college students) were primed by receiving a bogus score about their future success in interpersonal relationships, independent success, or no score (control condition). Results indicated that participants who rated higher dismissing attachment reported higher positive affect and self-esteem when in the interpersonal condition than those in the independent and control conditions. This study suggests that the need for belongingness persists even among those with attachment avoidance. However, this study included single-item measure for attachment and did not compare different attachment orientations in these conditions.

The studies described above were drawn from a variety of methodological and conceptual standpoints, though most lend support to the notion that attachment security is significantly associated with having a sense of belonging. Conceptually, individuals with high attachment anxiety likely experience fear of abandonment and lower self-esteem. They tend to seek excessive validation from others, but perceive others to be less supportive. Therefore, individuals with high attachment anxiety are less likely to perceive themselves as being worthy of belonging. Conversely, attachment avoidance is characterized by fear of intimacy, less self-disclosure toward others, and lower interpersonal trust. Consistent with their negative internal

working model of others, individuals with high attachment avoidance are less likely to perceive a need for belongingness, and evidence has supported this association. Thus when considering the link between insecure attachment and belongingness, we anticipate negative associations with both paths.

Sense of belonging → meaning in life. Recent research work has yielded considerable evidence for the link between belongingness and MIL. For instance, Lambert and colleagues (2010) conducted a series of five studies using college samples to examine whether family is an important source of meaning (studies 1-2) and contributor to MIL (studies 3-5). Study 1 found that participants (n = 50) reported their families were "the one thing that they find most meaningful" (p. 368) and study 2 demonstrated that participants (n = 231) ranked family members significantly higher than other possible sources of meaning (e.g., happiness, friends, religious faith). Results from studies 3 and 4, participants (n = 87, 130, respectively) suggest that family closeness and family support predicted perceived MIL. These findings remained significant above and beyond social desirability (study 5; n = 261). Taken together, findings from this study suggest that family belongingness and connectedness contribute to MIL, though the extent to which belongingness to other groups is not confirmed by this article.

In another article, Lambert and colleagues (2013) explored the relationship between a general sense of belonging and subjective MIL among college students. The first study (n = 126) indicated a significant correlation (β = .31) between sense of belonging (5-item measure developed for this study) and MIL (measured with the MLQ-Presence). The second study (n = 248) evaluated effects of sense of belonging on MIL three weeks later. Results indicated significant correlations between belongingness at time 1 with MIL at time 2 in an independently reviewed essay on meaning (r = .30), self-reported MLQ-Presence (r = .41), and

meaninglessness (r = -.31). Regression analyses indicated that sense of belonging predicted the essay rating on meaning above and beyond self-reported MIL. Participants in studies 3 (n = 105) and 4 (n = 165) were primed with conditions of belongingness, social support, or social value then rated their state meaningfulness (2-item measure). Results indicated that those primed with belongingness reported higher levels of state meaning.

Past research work has also explored the negative effects of social exclusion on MIL (Stillman et al., 2009). Researchers defined social exclusion as the deficit of belongingness and explored the effects by experimentally administering rejection and by participants' self-reported loneliness. The first two studies were experimental and involved exclusion, acceptance, and control conditions. In study 1 participants received feedback from an interaction that was rejecting, accepting, or neutral (n = 108); the design was replicated in study 2 using a Cyberball computer game (n = 121). Results from these studies found significantly lower levels of MIL in participants primed with the social exclusion conditions compared with both control and inclusion conditions; effect sizes for planned comparisons were small to medium (d = .33 to .60). In studies 3 (n = 202) and 4 (n = 212), participants completed self-report instruments of loneliness and MIL. Study 3 found that social exclusion significantly predicted MIL above and beyond mood indicators (valence, arousal, and happiness). Study 4 found significant mediation effects for three out of four meaning needs (i.e., purpose, self-worth, and value, but not efficacy; Baumeister, 1991) on the relationship between social exclusion and meaning in life.

State Hope

Our second Tier 1 mediator to the relationship between attachment insecurity and MIL is state hope. The study of hope in psychology has been heavily influenced by C. R. Snyder, whose measures (Snyder et al., 1991; 1996) and book (Snyder, 2000) have promoted the study of

hope and wellbeing. Drawing from early psychological writings on hope (e.g., Stotland, 1969), Snyder's Hope Theory approaches hope from a goal-oriented perspective. Hope is described as a cognitive set of *pathways thinking* and *agency*. Pathways thinking is the belief in one's ability to develop and form plans to achieve desired goals, whereas agency is the belief in a person's ability to achieve these goals (Snyder, 2002). The Hope Scale (Snyder; 1991) was validated as a measure for dispositional and enduring construct of hope. However, given that hope can also be understood as general coping strategy, Synder and his colleagues (1996) developed and validated the State Hope Scale (SHS), which measures more temporal and proximal events. The SHS is a 6-item self-report scale (three items measure agency and three items measure pathways thinking). The proposed study selects SHS to assess participants' state hope and the scale's reliability and validity will be reported in the Measures section.

Snyder's hope theory has been criticized for focusing solely on cognitive aspects of the construct of hope and excluding its emotional components (Scioli, Ricci, Ngyuen, & Scioli, 2011). Scioli and his colleagues argued that this cognitive emphasis has dominated the hope literature in psychology, whereas other disciplines (e.g., philosophy, theology/spirituality, and nursing) understand hope as an emotion. Rather than an individual emotion (e.g., anger, sadness), they conceptualize hope as an emotional system or network related to one or more life domains: mastery, attachment, survival, or spirituality. The domains function as a regulating system enhancing or maintaining perceived power, safety, and spiritual freedom. Consistent with this framework, Scioli and colleagues developed instruments that tap into trait hope (Comprehensive Trait Hope Scales) and state hope (Comprehensive State Hope Scales; CSHS). An exploratory factor analysis of the CSHS resulted in a four-factor solution accounting for 70% of the variance in the 40 items. The four factors corresponded with the four theoretical domains.

Two of these factors (mastery and spirituality) will be used in the current study and their psychometric properties are described in the Measures section.

Hope in Latino immigrants. Research on hope among Latinos has started to emerge in the literature in recent years. For example, Chang and Banks (2007) evaluated whether there are differences in hope across racial/ethnic groups. This study recruited a diverse college sample (46 European Americans, 30 African Americans, 33 Latinos, and 46 Asian Americans). Participants completed the Hope Scale (Snyder et al., 1991) as well as measures of problem solving (positive and negative problem orientation, rational problem solving, impulsive style, and avoidance style), positive and negative affect, and the SWLS. Latinos reported significantly higher levels of agency than European Americans and African Americans; Latinos also reported higher levels of pathways thinking than European Americans and Asian Americans. The authors reported similar patterns of correlations across ethnic groups. For example, significant positive correlations were found across four ethnic/racial groups for agency with positive affect as well as for both hope subscales (i.e., agency and pathways) with life satisfaction. However, there were other associations found in other ethnic/racial groups and not Latinos. For example, agency was negatively correlated with negative affect and pathways was positively correlated with positive affect for all groups except Latinos. The authors postulated that Latinos from this sample (at a large public university) were likely to have developed pathways in pursuing college education. Moreover, feeling good may contribute to agency (sense that one can accomplish goals), but not pathways thinking (developing a plan) for Latino college students. These results should be interpreted with caution since the sample sizes were relatively small and possible ceiling effects may exist in distribution of hope scores for Latinos. Though this study offers a unique insight into cultural differences, it would improve with a larger sample and more complex analyses.

Another study evaluated whether hope contributes to lower suicidal risk among Latinos (Chang, Yu, Kahle, Jeglic, & Hirsch, 2013). Participants included 155 Latino college students, who completed the Hope Scale (Snyder, 1991), a positive problem orientation measure, and two measures of suicidal risk tapping into hopelessness and suicide behaviors. Results indicated that hope and positive problem orientation significantly predicted lower levels of hopelessness and suicide behaviors (R^2 = .30, .13, respectively). Significant hope × positive orientation interaction effects were found for both outcome variables (ΔR^2 = .03, .05, respectively) and simple slopes analyses indicated that holding a positive problem orientation can buffer the negative effects of low hope on hopelessness and suicidal behaviors.

In another study, Vela and colleagues (2014) examined the relationships among positive psychology variables (i.e., MIL, spirituality) and family factors (i.e., parental education) on goal-specific hope and self-reported college performance. Participants were 166 Latino students attending a Hispanic-Serving Institution (19% first generation immigrant, 55% second generation status, 6% third generation, and 20% fourth generation or more). The regression model (generation status, MLQ scales, mother and father education, and spirituality) significantly predicted goal-specific hope, accounting for 18% of the variance of hope scores (R^2 = .18). All predictive variables were significant in the model except generation status and father education. Squared semipartial correlations indicated large effects of MLQ-Presence and MLQ-Search, and medium effect of spirituality on goal-specific hope. The regression predicting college performance was not significant, suggesting that positive psychology and family education factors play an important role in hope, but not necessarily in college performance of Latino students.

State Hope as Mediator of Attachment-Meaning in Life

As with the sense of belonging, the present study conceptualized insecure attachment to contribute to MIL and poorer wellness partially via the path of decreasing one's state hope. Within this model, hope is expected to be germane to immigrant individuals' experiences given the amount of loss (i.e., of country, family, network) and stressors (i.e., acculturative stress) they constantly deal with. State hope was used in the current model since attachment orientations are considered more stable, personality traits and we are interested in understanding whether state hope plays a coping role on attachment and MIL.

Attachment → hope. Research for the effects of attachment on hope have only emerged in the past decade, with only a handful of studies exploring this link. Individuals with high attachment anxiety likely experience a fear of failure and rejection, and tend to have lower sense of self-worth. In the context of hope, these features may disrupt their ability to form coherent goals and their perceived ability to accomplish these goals (i.e., lower agency or mastery). They may spend more energy on avoiding negative states than working on these goals. On the other hand, individuals with high attachment avoidance tend to have a fear of intimacy and utilize behavioral avoidance. In the context of hope, they are more likely to detach from approaching goals (i.e., achievement-oriented goals) and to avoid negative states (e.g., frustration, humiliation), since these would activate the attachment system. A study by Meyer, Oliver, and Roth (2005) confirmed these two pathways: Avoidance was correlated with less behavior activation, whereas Anxiety was correlated with more behavioral inhibition. Though not evaluating hope, it is likely that both of these pathways would contribute to lower reports of hope. Past studies that have examined the relationship between attachment and hope often

involve both variables in predicting psychological wellbeing rather than solely between attachment and hope. The following section describes three of the type of studies.

Attachment-hope-wellbeing. Some initial research attention has evaluated hope as a mediator between insecure attachment orientations and wellness. One study examined the mediating effect of hope for parental attachment and adult attachment on mental health (Shorey, Snyder, Yang, & Lewin, 2003). This study focused on the developmental trajectory of attachment on wellbeing using a sample of diverse college students (N = 263; 47% White, 32% Hispanic, 13% Asian, and 8% African American). Parental attachment was measured with two parenting instruments; adult attachment security was measured with three subscales of the Attachment Style Questionnaire (Feeney, Noller, & Hanrahan, 1996); hope was measured using the Hope Scale (Snyder et al., 1991); and health was measured with four indicators (positive affect, depression, anxiety, and loss of control). Results from SEM indicated a good model fit in their final model: $\chi^2(104) = 191.64$), CFI = 0.95, RMSEA = 0.07 (90% CI = .05-.08). Hope partially mediated the relationship between adult attachment and wellbeing. Step 1 included a significant direct effect of attachment on wellbeing (standardized coefficient = .72). In step 2 the indirect path of attachment to hope and hope to wellbeing was also significant (z = 2.14). When controlling for the indirect effect, attachment still had a significant, but reduced direct effect on wellbeing (standardized coefficient = .41). Results of this study suggested that the positive effects of attachment security on wellbeing can be explained through trait hope. However, a major limitation of this study was that the unique effects of Anxiety and Avoidance were not explored for the indicators of the latent variable representing attachment security were not based on the two-dimension adult attachment model.

Lavy and Littman-Ovadia (2011) explored the mediating effects of hope (among 24 other virtues) on the association between insecure attachment dimensions (Avoidance and Anxiety) on life satisfaction. This study has been introduced in a previous section when describing the relationship of attachment and life satisfaction. However, a highlight of the findings in this study is that hope was the only variable of 24 strengths measured in this study that functioned as a mediator for both Avoidance and Anxiety on life satisfaction. Despite the strengths of these two studies, both conceptualize hope as a trait. The use of trait hope makes the direct path from adult attachment conceptually problematic since attachment is also a personality-level construct. Instead, a state measure of hope may strengthen this model. Below is the only empirical study available in the literature that examined the mediator role of state hope on attachment effect.

This study evaluated the mediating effect of state hope on the association between attachment and overall health (Simmons, Nelson, & Quick, 2003). It focused on a sample of home health care nurses (N = 175) and measured state hope using the SHS (Snyder et al., 1991). Health was measured using a 10-item scale of health perception and attachment was measured using a self-reliance measure (Joplin, Nelson, & Quick, 1999), which includes three scales (i.e., interdependence, counterdependence, and overdependence). Results from multiple regression analyses indicated that interdependence and counterdependence, but not overdependence, predicted perceived health (β = .165, -.163, -.04, respectively). State hope fully mediated the effect of interdependence and overdependence, such that when controlling for state hope the relationship between attachment and health was non-significant (β = -.008, -.04, respectively). Although we agree with the use of state hope, this study used a measure that was not widely used to measure adult attachment. In addition, this study only focused on home health nurses, thus findings may not be generalizable to other populations. Taken together, these studies provide

initial evidence confirming not only the link between attachment orientations and hope, but also the mediating effects of hope on attachment and wellbeing.

Hope → meaning in life. Not surprisingly, hope has also been associated with MIL. The theoretical underpinnings to this relationship are fairly straightforward: hope involves cognitive and emotional processes that allows individuals to plan and pursue goals, which in turn has positive effects, including having a sense of purpose and that one's life is significant (Feldman & Snyder, 2005). These two constructs are especially amenable to each other since both include the perception rather than real pathways to achieve the goal (hope) and perception that the goal and one's life matters (MIL). Feldman and Snyder explored the possible overlap of hope and MIL in a college sample (N = 139). Results of an EFA with items from instruments for MIL (i.e., PIL, SOC, and LRI) and hope (Hope Scale; Snyder, 1991) yielded a one-factor solution. However, in subsequent analyses hope and MIL were alternately entered in first and second steps in regression analyses predicting depression and anxiety and both constructs accounted for additional amounts of variance in outcome variables. Authors concluded that they are distinct constructs that uniquely contribute to psychological distress.

Bronk and her colleagues (2009) explored direct and indirect effects of MIL and hope on life satisfaction from a developmental trajectory perspective. They administered measures of MIL (using items from various instruments), the Hope Scale (Snyder, 1991), and the SWLS to samples of adolescents (n = 153; M_{age} = 14.0), emerging adults (n = 237; M_{age} = 21.0), and adults (n = 416; M_{age} = 35.5); participants were recruited from community and college. Results indicated that MIL significantly predicted higher life satisfaction across three age groups (rs = .33 to .66). MIL also correlated significantly with trait hope, though correlation coefficients were larger for the agency subscale (rs = .44 to .67) than the pathways subscale (rs = .21 to .42).

Results from a series of hierarchical multiple regressions indicated a significant mediation effects for agency on the MIL-life satisfaction association. The mediating effects of the pathways subscale and the full hope scale on this relationship were only significant for the adult sample. Results from this study highlighted the direct and indirect effects of MIL on wellbeing indicators and the mediator role of hope on this links, but they may be moderated by age.

Longitudinal effects for the relationship between MIL and hope on depression have also been explored (Mascaro & Rosen, 2005). Participants (N = 191) completed measures at baseline and two months later for MIL (using the LRI and the PMP), state hope (SHS) and trait hope (Herth, 1991), and depression (using the Depression scale from the Personality Assessment Inventory; Morey, 1991). In addition, they completed a measure of social desirability and the Big 5 personality traits at baseline. Nine hierarchical multiple regression analyses were conducted. Baseline scores of hope, depression, the Big 5 and social desirability were entered in the first step; time 2 measures of MIL were entered in the second step. Results from the analyses indicated that MIL was significantly associated with higher levels of state hope and trait hope, and lower levels of depression, even after controlling for personality and social desirability variables (ΔR^2 = .058, .036, and .063, respectively).

Summary for Sense of Belonging and State Hope

Sense of belonging and state hope were selected as mediators between attachment orientations and MIL. We anticipate that insecure attachment will predict lower MIL by decreasing one's sense of belonging and state hope. Empirical evidence supports this hypothesis since insecure attachment predicts lower sense of belonging (Hagerty et al., 2002; Rankin et al., 2000), and high belongingness has been found to predict high MIL (Lambert et al., 2013). Likewise, hope has been found to mediate the associations between attachment orientations and

various indicators of psychological wellbeing (e.g., Lavy & Littman-Ovadia, 2011). Unique and shared effects of hope and MIL have been found longitudinally and across age groups (Bronk et al., 2009; Mascaro & Rosen, 2005).

These two variables were selected as the first-tier of mediators in the model for several reasons. First, they represent both interpersonal (sense of belonging) and cognitive/emotional (state hope) variables that are conceptually and empirically relevant to attachment theory. Although yet to be widely researched, available empirical studies provided initial evidence for this link. Second, these variables are particularly important for the Latino immigrants, who often experience numerous stressors and losses during the immigration and acculturation process. Having greater sense of belongingness and more hope could play protective roles, though we still know very little about their role in this population. Finally, the constructs of belongingness and hope reflect the broader emphasis of positive psychology for examining the effects of strengths and positive effects rather than symptoms and pathology.

CHAPTER 3

METHODOLOGY

Participants

A sample of 352 participants were recruited from several community settings in Texas. Based on selection criteria (adults, born in Latin America, moved to U.S. at age 12 or older), 22 participants were excluded from the study since they moved to the U.S. before age 12 years (n = 14) or did not report that demographic information (n = 8). The final sample included 330 first-generation Latino immigrants, which exceeded the acceptable sample size of 200 (Barrett, 2007; Breckler, 1990; Goldstein, 2006). An *a priori* power analysis conducted with a calculator developed by Preacher and Coffman (2006) based on $\varepsilon_0 = 0.05$ and $\varepsilon_1 = 0.01$ (where the ε_0 is the null value for RMSEA and ε_1 is the alternate value for RMSEA) and df = 123, power set at .80, and $\alpha = .05$. The power analysis resulted in a minimum sample of N = 157.42.

The sample included 235 women (71.2%) and 94 men (28.5%). The mean age of the sample was 41.49 (SD = 11.67). Most participants were married (n = 248, 75.2%), followed by single never married (n = 34, 10.3%), divorced (n = 21, 6.4%), separated (n = 15, 4.5%), and widowed (n = 12, 3.6%). The average annual family income was $33,653.25 ($SD$ = $27,795.65). Educational level was as follows: nine participants reported no formal education, 66 reported having a 6th grade education (primaria), 88 participants reported a 9th grade education (secundaria), 100 participants had a high school education (preparatoria), 50 participants reported a college degree, and 16 participants reported holding a graduate degree (maestría o doctorado).

The average age of immigration was 24.27 (SD = 9.06) and the average number of years in the U.S. was 17.22 (SD = 10.47). Most participants reported they were from Mexico (n = 267,

80.9%). Sixty-one participants (19.1%) reported they were from another Latin-American country, including Colombia (*n* = 15), El Salvador (*n* = 13), Cuba (*n* = 11), Peru (*n* = 7). Three or fewer participants indicated they were from each of following country or U.S. territory: Argentina, Costa Rica, Ecuador, Guatemala, Honduras, Puerto Rico, Uruguay, and Venezuela.

Participants self-reported their English language ability. Thirty-four participants (10.3%) said they spoke English very well, 103 participants (31.2%) spoke English well, 117 (35.5%) spoke English poorly, and 66 (20%) spoke English very poorly. Most participants reported speaking Spanish only at home (*n* = 275, 83.3%), whereas only 12 participants (3.6%) reported speaking English only at home; 41 participants (12.4%) reported they speak English and Spanish equally at home.

Procedures

Participants were recruited from several community institutions that target Latino immigrant populations, including school-based parent engagement classes by The Concilio, parent-teen health and fitness classes by The Concilio, and English as a Second Language (ESL) classes at Vickery Meadows Learning Center—West Dallas. In addition, the snowballing recruitment method was used, in which participants were encouraged to tell friends and family about the study. In all, 67 participants (17.9%) were recruited from ESL classes, 109 (33%) were recruited from parent engagement classes or parent-teen health classes, and 162 (49.1%) were recruited with the snowballing method (including 68 or 20.6% from churches). Signed informed consent forms were obtained prior to completing surveys. Informed consent forms and research survey packets were available in both English and Spanish, though the current study only used Spanish surveys. Survey packets containing the measures described below, took approximately 35 to 45 minutes to complete and were completed in public settings or taken and

returned to the researcher (i.e., if distributed in a class or public meeting). A financial incentive of $15 was offered to each participant upon completing the research survey.

Ethical Considerations

Because the proposed study is survey-based research that does not involve sensitive material, minimal risk was involved for research participants. Participants were provided with an informed consent form with information regarding the nature and purpose of the study, foreseeable risks, potential benefits, confidentiality, and voluntary participation. Specifically, participants were informed that their participation and their responses will remain confidential and that no identifying information will be gathered in the survey; that data will be reported in aggregate form and the completed surveys will only be viewed by the investigators and eligible members of the research laboratory who have completed required human subject protection training. No circumstances exist that would require confidentiality to be broken. Participants were also informed that their participation is completely voluntary and that they may decline participation at any point during the data collection procedure without any consequence.

Instruments

Structural equation modeling (SEM) was used in the current study. The conceptual model consists of six latent variables with three indicators per latent variable (as recommended by Kenny, Kashy, & Bogler, 1998). The two attachment dimensions were measured using the ECRS. Three item parcels were created from each of the 18-item subscales for the latent variables of attachment anxiety and attachment avoidance. We operationalized sense of belonging with three indicators, including general belongingness, SCETH, and SCMN. State hope was also operationalized with three observed variables, the SHS (which reflects a cognitive understanding of hope) as well as the Mastery and Spirituality subscales of the CSHS (which

reflects a more emotional framework for understanding hope). The indicators predicting MIL will include two of the most common measures of MIL (i.e., MLQ-Presence and PIL) and the Work and Meaning Inventory (WAMI; Steger et al., 2012), a measure that taps into the MIL related to one's work. The latent variable representing wellness was made up of the depression subscale of the DASS-21, the SWLS, and the somatic scale from the Patient Health Questionnaire.

Demographics

Participants were asked to provide some general demographic information, including age, gender, ethnicity, income, educational level, current relationship status, country of origin, age of immigration, and length in the U.S.

Exogenous Variables: Adult Attachment

Experiences in Close Relationships Scale (ECRS; Brennan, Clark, & Shaver, 1998). The ECRS is a 36-item self-report measure of adult attachment consisting of Anxiety and Avoidance subscales. The Anxiety subscale measures fear of abandonment and rejection; the Avoidance subscale assesses discomfort with intimacy and dependence. Brennan et al. (1998) administered 323 non-redundant items from all attachment measures available at the time when the scale was developed to a college sample (N = 1,086) and conducted an exploratory factor analysis (EFA). A two-factor structure emerged with Anxiety and Avoidance being nearly orthogonal to each other (r = .12). The ECRS measures each dimension with 18 items (with 14 of the 36 items reverse scored). Participants respond to statements about their experiences in romantic relationships on a 7-point Likert scale from 1 (*disagree strongly*) to 7 (*agree strongly*). The ECRS is scored by calculating the average rating on items within each subscale; higher scores indicate greater anxiety about rejection/abandonment and greater avoidance of

intimacy/interdependence. Internal consistency coefficients for Anxiety and Avoidance were .91 and .94, respectively (Brennan et al., 1998). Test retest reliability has been found for periods ranging from three weeks (.70 for both subscales; Brennan, Shaver, & Clark, 2000) to six months (.71 and .68 for Avoidance & Anxiety, respectively; Lopez & Gormley, 2002). Evidence for validity of the subscales was found by significant associations with another attachment measure, the RQ (Bartholomew & Horowitz, 1991) as well as with the theoretically related constructs intimate touch and romantic sexuality (Brennan et al., 1998). Among a Latino/Hispanic American college sample, the ECRS was found to have a similar factor structure as with the Caucasian sample; internal consistency reliability for Anxiety and Attachment subscales was reported to be .92 and .93, respectively; and subscales were significantly associated with negative mood (Wei et al., 2004). The ECRS has been translated and validated in Spanish using a Latino bilingual college sample (n = 183) (Shelton & Wang, in press). An EFA yielded a two-factor structure with adequate factor loadings. Construct validity was established by significant correlations in the expected directions with measures of social self-efficacy, self-esteem, depression, and self-disclosure. Internal consistency reliability of the Spanish ECRS appears adequate (α = .89 and .91) and 3- to 8-week test-retest reliability coefficients were reported to be .60 and .70 for Anxiety and Avoidance, respectively.

Tier 1 Mediator 1: Sense of Belonging

General Belongingness Scale (GBS; Malone, Pillow, & Osman, 2012). The GBS is a 12-item instrument that assesses a general sense of belongingness. Participants respond to statements about their sense of belongingness on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The instrument has two factors of Acceptance/Inclusion (e.g., "I feel accepted by others") and Rejection/Exclusion (e.g., "I feel like an outsider"). However, a

total score is recommended and calculated by reverse-scoring the six items representing Rejection/Exclusion. Higher scores reflect having a greater general sense of belongingness and lower feeling of exclusion. The GBS was validated with three college samples (N = 81, 875, and 213), most of which identified as Latino (38% to 41%) or Caucasian (31% to 44%; Malone et al., 2012). Factorial validity was established with an EFA, which resulted in a two-factor structure accounting for 68.3% of the variance. However, the factors are highly correlated (r = -.67 to -.90), thus the authors recommend using a total score. Convergent validity was established by significant correlations with other measures of belongingness (Social Connectedness, Loneliness, and SOBI-P). For discriminant validity, the GBS was found to be distinct from the need to belong, social assurance, and attachment measures. Predictive validity was established with significant correlations with life satisfaction, happiness, and depression. Incremental validity was found since the GBS accounted for an additional amount of variance in life satisfaction, happiness, and depression above other measures of belongingness. High internal consistency across samples was also found (α = .92 to .94).

Social Connectedness to Mainstream Society (SCMS) and Ethnic Community (SCETH; Yoon et al., 2012). The SCMS and SCETH are two parallel 5-item scales that measure sense of belonging to the mainstream society and ethnic community, respectively. These scales were based on the social connectedness scale (SCS; Lee & Robbins, 1995) in the context of cultural belongingness. Participants rate statements on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*), and higher scores reflect a greater sense of connectedness to the different cultural communities. Sample items include "I feel connected with the U.S. society" (SCMS) and "I feel connected with the _____ American community" (SCETH). For the current study we used Latino/Hispanic American community. Psychometric properties of these two scales

were assessed using Mexican American college students (n = 200) and Asian international students (n = 134). Convergent and discriminant validity were also supported given that both SCMN and SCETH were significantly correlated with the SCS (r = .40, .39; Lee & Robbins, 1995). SCMN was significantly correlated with acculturation (r = .62), but not enculturation (r = .21); conversely, SCETH was significantly correlated with enculturation (r = .31), but not acculturation (r = .09). The scales had adequate internal consistency (α = .92, .95, respectively) and were significantly correlated (r = .28).

Tier 1 Mediator 2: State Hope

State Hope Scale (SHS; Snyder et al., 1996). The SHS is a 6-item measure that assesses a person's current goal-directed thinking. Participants respond to statements about their state hope on an 8-point Likert scale from 1 (*definitely false*) to 8 (*definitely true*). Three SHS items reflect pathways thinking (e.g., "I can think of many ways to reach my current goals") and three items tap into agency (e.g., "right now I see myself as being pretty successful"). Items were modified from the Hope Scale (measuring dispositional hope) to reflect the current moment. Ratings are averaged and higher scores reflect having a greater sense of hope at the moment. Snyder and his colleagues (1996) validated the SHS with college students (N = 444, 120, 90, and 74; race/ethnicity not reported). A principal components factorial analysis indicated a two-factor structure (reflecting pathways thinking and agency), though total score was used in the present study. Convergent validity was found with significant correlations with higher dispositional hope, self-esteem, and positive affect, and with lower negative affect. Discriminant validity was supported with findings that SHS accounted for variance in appraisal of events and thoughts above and beyond dispositional hope. Predictive validity was found with SHS scores predicting actual goal-related performance on a verbal learning task above and beyond academic

performance. As expected with a state measure, test-retest reliability ranged from r =.49 to .93 in a 4-week period. Internal consistency was found to be acceptable (α = .79 to .95). The SHS has been translated into Spanish and used in a Colombian sample, though psychometric properties were not reported (Contreras & Juárez, 2013).

Comprehensive State Hope Scales (CSHS; Scioli, Ricci, Ngyuen, & Scioli, 2011). The CSHS is a 40-item measure that measures state hope. Hope is measured as an emotional network of four systems. The four systems are Mastery (higher goals, empowerment), Attachment (trust, connectedness), Spirituality (transcendence, higher power), and Survival (coping, stress management). The 8-item Mastery and 12-item Spirituality subscales were selected for the current study. These scales were selected since they are particularly relevant with sense of purpose (i.e., mastery) and philosophy and faith (i.e., spirituality), two pathways suggested to mediate the relationship between attachment orientations and MIL (Mikulincer & Shaver, 2013). Participants rate statements on a 5-point Likert scale from 0 (*none* or *little*) to 4 (*extremely strong*). A sample item for Mastery is "I'm succeeding in ways that really matter to me" and one for Spirituality is "I draw inspiration from my spiritual beliefs." Higher scores indicate higher perceived hope in goals and in one's spiritual framework. Scioli and his colleagues validated the SHS with an Internet sample (n = 524; race/ethnicity not reported) and college (n = 81). EFA results indicated a 40-item four-factor structure accounting for 70% of the variance; the factors correspond to the four theoretical systems. Convergent validity was established with significant correlations between CSHS-Total score and the Herth (1991) Hope Scale. CSHS-Mastery was correlated with higher MLQ-Presence (r = .46) with significant correlations with higher dispositional hope, self-esteem, and positive affect, and with lower negative affect. Moreover, participants primed with hope (i.e., watching a speech by Dr. Martin

Luther King, Jr.) reported higher CSHS scores, suggesting state hope (rather than trait hope). Internal consistency was high for Mastery (α = .93) and Spirituality (α = .98).

Tier 2 Mediator: Meaning in Life

Meaning in Life Questionnaire (MLQ-Presence; Steger, 2006). The MLQ is a 10-item instrument that measures meaning in life. Participants respond to statements about their sense of meaning on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The instrument has two 5-item subscales representing of Presence of Meaning (e.g., "I understand my life's meaning") and Search for Meaning (e.g., "I am looking for something that makes my life feel meaningful"). For the present study, we only used the Presence subscale since the Presence and Search are considered orthogonal (Steger et al., 2006). Moreover, the two scales function independently from one another. For example, lower Presence leads to more Search for meaning, but the reverse is not true (Steger, Kashdan, Sullivan, & Lorentz, 2008). Higher MLQ-Presence scores reflect having a greater sense made of and significance felt in life. Steger and colleagues validated the MLQ using college students (*N* = 151, 154, 400, 70), most of whom identified as Caucasian (75% to 79%). Both EFA and CFA confirmed a 10-item, two-factor structure. Convergent validity for the MLQ-Presence was found with positive correlations with life satisfaction, positive emotions, and intrinsic religiosity, and negatively correlated with depression, negative emotions, and neuroticism; discriminant validity was found with non-significant correlation with value rankings. Steger and colleagues further evaluated validity using the multitrait-multimethod matrix approach. Convergent validity of the MLQ-Presence was established with significant correlations with self-report measures of meaning (monomethod) and informant ratings (heteromethod). MLQ-Presence was also found to have better discriminant validity than other meaning measures (i.e., the PIL and LRI) using the most

strict form of discriminant validity (comparing monotrait-heteromethod to heterotrait-monomethod). One month test-retest reliability coefficients were good (r = .70 and .73 for Presence and Search, respectively). Internal consistency was found to be acceptable for Presence (α = .81 to .86) and Search (α = .84 to .87). The MLQ has been translated into the Spanish language and validated with samples from Argentina (Góngora & Castro Solano, 2011) and Spain (Steger, Frazier, & Zacchanini, 2008). CFA resulted in a two-factor structure across both samples, though a 9-item structure fit the data better in the Argentine sample. Internal consistency was also found to be acceptable for Presence (α = .81 to .82) and Search (α = .88 to .90) using the Spanish MLQ.

Purpose in Life Test (PIL; Crumbaugh & Maholick, 1964). The PIL is a 20-item instrument based on logotherapy principles that measures perceived meaning and life purpose. Participants respond to statements about their state hope on a 7-point Likert scale and different anchors are used for each item. For example, participants rate the statement, "In life I have ___." between 1 = "no goals or aims at all" to 7 = "very clear goals and aims." Ratings are summed and higher scores reflect greater meaning and purpose. Though initially considered unidimensional, the PIL has undergone criticism since items reflect life satisfaction in addition to meaning. In fact, numerous CFA models of the PIL have supported this view. For example, Morgan and Farsides (2009) found that three items (3, 8, and 20) measure meaning and purpose, whereas six items (2, 5, 7, 10, 17, and 19) measure excitement in life. In a sample of Spanish university students (N = 457), García-Alandete, Rosa, and Sellés (2013) found that four items (3, 7, 17, and 20) measure MIL and six items (1, 2, 5, 6, 9, and 11) measure satisfaction. In the present study we included seven items (items 3, 4, 7, 8, 13, 17, and 20) that have loaded onto a purpose and meaning factor in previous studies (for reviews see García-Alandete et al., 2013;

Schulenberg & Melton, 2010). The scale has been found to have significant positive correlations with Life Purpose Questionnaire (LPQ; Hablas & Hutzell, 1982), life satisfaction, and psychological distress (Outcome Questionnaire-45.2; OQ45; Lambert et al., 2005). Using multiple regression, the PIL-SF predicted OQ45 scores above and beyond the MLQ and LPQ, suggesting discriminant validity. Internal consistency for the PIL-SF was adequate ($\alpha = .84$) and comparable to the full scale ($\alpha = .86$). Internal consistency for the purpose subscale in the Spanish version was acceptable ($\alpha = .71$).

Work and Meaning Inventory (WAMI; Steger, Dik, & Duffy, 2012). The WAMI is a multidimensional 10-item instrument that measures meaning in work. Items are rated on a 5-point Likert scale from 1 (*absolutely untrue*) to 5 (*absolutely true*). Subscales include greater good motivation (3 items; e.g., "the work I do serves a greater purpose"), positive meaning (4 items; e.g., "I have found a meaningful career"), and contribution to meaning-making (3 items; e.g., "my work helps me make sense of the world around me"). The total score was used in the present study. Ratings are summed and higher scores reflect having a greater sense of meaning in one's work. The WAMI was validated with a sample of university employees ($N = 370$; 90% identified as European American) (Steger et al., 2012). Results from the EFA and CFA indicated a good model fit for a three-factor structure organized under a higher order factor of work meaning. Significant correlations in the expected direction with scores on similar constructs (e.g., calling, work orientations), work-related variables (e.g., days absent, job satisfaction), meaning, and psychological wellbeing (e.g., MLQ-Presence, life satisfaction, depression) suggest adequate construct validity. Incremental validity was also established using hierarchical multiple regression; WAMI accounted for variance in life satisfaction above and beyond MLQ-

Presence, calling, and life satisfaction. High internal consistency was found for the full scale (α = .93).

Outcome: Wellness

Depression, Anxiety, and Stress Scale—21 (DASS-21; Lovibond & Lovibond, 1995). The DASS-21 was designed to measure the distinguishing core symptoms of depression (e.g., "I felt that I had nothing to look forward to"), anxiety (e.g., "I was aware of dryness of my mouth"), and stress (e.g., "I was worried about situations in which I might panic and make a fool of myself") with seven items for each subscale. The DASS-21 has been found to have adequate factorial validity, with CFA indicating a structure of three correlated factors (Crawford & Henry, 2003). Only the depression subscale of the DASS-21 (DASS-Dep) was used in the current study to measure participants' symptoms of depression. Participants rate each item on a 4-point Likert scale to indicate how much the statement applied to them over the past week. Previous research on the DASS-21 (Osman et al., 2012) has yielded adequate internal consistency for DASS-Dep (α = .88). The DASS-21 has been translated into Spanish and validated in a bilingual Latino clinical sample (Daza, Novy, Stanley, & Averill, 2002). A CFA confirmed the three-factor structure for the Spanish DASS-21. Construct validity (discriminant and convergent) was established with significant associations with correlations in the expected directions with measures of depression (BDI) and anxiety (Beck Anxiety Inventory). Internal consistency coefficient for the DASS-Dep was high (α = .93).

Satisfaction with Life Scale (SWLS; Diener et al., 1985). The SWLS is 5-item measure for evaluating global life satisfaction. Participants rate subjective well-being statements on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items include, "In most ways my life is close to my ideal" and "The conditions of my life are

excellent." Items are summed and higher scores indicate greater satisfaction in life. Diener and colleagues evaluated psychometric properties using a college sample (n = 176 and 163), older adult sample (n = 53) Convergent validity has been found with significant correlations with lower psychological symptoms, independent ratings of life satisfaction, self-esteem, and neuroticism (Diener et al., 1985). Two-month test-retest reliability (r = .80) and internal consistency (α = .86) was also found in the original measure. The SWLS was translated and back-translated into Spanish by a team of bilingual scholars from Spain and Latin America (Vazquez, Duque, & Hervas, 2013). The Spanish version was validated in a large sample from Spain (N = 2,964), and it was found to be unidimensional (using CFA). Significant correlations were found with subjective happiness and social support. Internal consistency in the Spanish sample was high (α = .88).

Patient Health Questionnaire—Somatic Scale (PHQ-15; Kroenke, Spitzer, & Williams, 2002). The PHQ-15 is a self-report instrument used to measure somatization. It was derived from a longer instrument designed for physicians to assess common psychiatric concerns (Spitzer et al., 1994). Participants rate the extent to which they experienced physical symptoms in the previous four weeks on a 3-point Likert scale from 0 (*not at all*) to 2 (*bothered a lot*). Sample items include "Stomach pain" or "Dizziness." Psychometric properties were evaluated adult patients from hospitals and clinics (n = 6,000). Convergent validity was found with correlation coefficients measures of physical health, sick days, and psychological distress. Internal consistency coefficients are acceptable (α = .82; Kocalevent, Hinz, & Brähler, 2013). The Spanish version of the PHQ-15 has also been validated in a large sample from Spain (N = 3,362; Montalbán, Vives, & Garcia-Garcia, 2010). Convergent validity demonstrated by significant

correlations with measures of depression and relevant demographic variables and internal consistency were also acceptable for the Spanish version ($\alpha = .78$).

Translation of Instruments

The survey packet was made available in both English and Spanish versions. Although particular efforts have been made to select measures that have been validated with Spanish-speaking samples, a number of selected measures have not been used with Latino individuals. The GBS (Malone et al., 2012), SCMN, SCETH (Yoon et al., 2012), CSHS (Scioli et al., 2011), and WAMI (Steger et al., 2012) as well as the demographic items were translated to Spanish and then back-translated to English independently by a team of bilingual researchers. The Spanish versions of the ECRS (Shelton & Wang, in press), SHS (Contreras & Juárez, 2013), MLQ (Góngora & Solano, 2011), PIL (García-Alandete et al., 2013), PHQ-15 (Montalbán et al., 2010), DASS-21 (Daza et al., 2002), and SWLS (Vazquez, Duque, & Hervas, 2013) developed by other researchers were adapted in this study.

CHAPTER 4

RESULTS

Data Cleaning, Missing Data, and Preparation

Screening and analysis of data was conducted prior to running primary analyses. First, a pattern analysis indicated that only one item had > 6% missing data: 16.1% participants left item PHQ04 blank. This item was excluded from the analyses since it is intended for women only (asks participants to rate the extent to which they experienced pain from their menstruation cycle). Visual inspection of the data identified 32 participants who left at least 50% of items in at least one scale incomplete. Fourteen participants left the WAMI incomplete (most of these participants are not currently working), nine left the ECRS blank (eight of these participants are not currently in a relationship), four participants completed the PIL incorrectly, and seven participants left the PHQ-15 and/or the DASS-21 incomplete. These 32 participants were excluded from the missing data analysis, but included in the EFA and reliability analyses. Missing data were replaced using the expectation-maximization (EM) procedure. Skewness, kurtosis, and outliers were checked for each of the observed variables in the model to evaluate normality. Using a Kline's (2012) thresholds of skewness (> 3.0 as extremely skewed) and kurtosis (> 10.0 as problematic), all observed variables were within acceptable limits.

Univariate and multivariate outliers were identified and handled following recommendations by Aguinis, Gottfredson, and Joo (2013) and Tabachnick and Fidell (2012). Univariate outliers across 19 observed variables were examined by SPSS boxplot function and standardized deviation analysis (+ 3 *SD*). The items within the scale of each outlier were examined for data entry or response error (i.e., item responses falling outside the expected range or extreme scores); three outliers were due to data entry error and were corrected. A second

round of analyses revealed 34 univariate outliers across seven observed variables (GBS2, SCETH, SHS, PIL, SWLS, DASS-Depression, and PHQ-15). Visual inspection of the scores indicated these individuals scored higher than the rest of the sample, but were within the range of responses to the Likert scale, thus were considered interesting or influential outliers. Nine participants endorsed higher scores on the DASS-Depression and one endorsed elevated PHQ-15 symptoms (at > 3 *SD*). While these participants could belong to a separate population (a clinical population), the instruments used were screeners rather than diagnostic tools. These cases were not excluded from the analyses since they are deemed interesting outliers and may decrease power by reducing the variance in their respective scales (Aguinis et al., 2013). Multivariate outliers were detected using the multivariate Mahalanobis distance statistic (*M* score). Ten cases with *M*-distance values exceeding the critical value of $p < .001$ ($M = 42.31$) were identified as multivariate outliers and removed from analyses. The first measurement model was analyzed excluding these ten cases and resulted in slightly better model fit, χ^2 (137, $N = 288$) = 343.67, $p < .001$, $\chi^2 / df = 2.51$; CFI = .91; GFI = .89; SRMR = .08; RMSEA = .07 (90% CI .06, .08) than with them in χ^2 (137, $N = 298$) = 353.18, $p < .001$, $\chi^2 / df = 2.57$; CFI = .91; GFI = .89; SRMR = .07; RMSEA = .07 (90% CI .06, .08). Multicollinearity analyses revealed adequate levels of Tolerance (> .10) and variance inflation factor (VIF < 10.0).

Preliminary Analysis

Cross Cultural Validation of Instruments: EFA and Reliability Analyses

All the instruments used in the present study were developed in English. Some of the instruments have been translated into Spanish and validated with Spanish-speaking samples, while others have not (i.e., GBS, SCMN, SCETH, SHS, CSHS, and WAMI). Because first-generation Latino immigrants are the population of interest, it was anticipated that the vast

majority of the participants in this sample will select the Spanish version of the research packet. Therefore, reasonable efforts were made to ensure and examine the equivalence of the English and Spanish versions at both linguistic and psychometric levels. We used the *translation-back translation* method with three bilingual and bicultural researchers to establish linguistic equivalence. The three translators (two Mexican and one Argentine) are graduate students with at least a master's degree in psychology and experience translating psychological instruments into Spanish. EFA and reliability analyses were conducted for all instruments before the primary analyses to ensure the factor structures and psychometric properties of the measured constructs are similar to those identified in the literature with English-speaking samples. As recommended by Tabachnick and Fidell (2012), a principle components analysis (PCA) extraction was used first to estimate the number of factors (based on eigenvalues, percentage of variance accounted for by each factor, and visual inspection of the scree plots). Next, if results indicated more than one dimension or a different factors structure than the original findings, maximum likelihood (ML) extraction was used to examine factor loadings. Results of these analyses are described below and summarized in Table 3.

Attachment measure. A PCA extraction with 36 ECRS items revealed eight components with eigenvalues ≥ 1. The first two components had eigenvalues of 10.01 and 4.63 and accounted for 40.68% of the variance. Eigenvalues for the remaining factors were < 2, with minimal change in eigenvalues after the second component; the scree plot revealed a visual break after the second component. Next, an EFA with ML extraction and varimax rotation was performed constraining the 36 items to two factors. Varimax matrix rotation was selected because Anxiety and Avoidance are conceptualized as orthogonal dimensions (Brennan et al., 1998).

Table 3

Summary of EFA and Reliability Analyses Evaluating Cross-Cultural Validity of Instruments

Measure	Factors (items)	% Acc't	α	Items removed	Factor structure equivalent to original (English)
ECRS	2 (32)	40.1	.94, .83	04, 22*, 29, & 34 low factor loading (< .4)	No. Factor 1 included 15 Anxiety and 9 Avoidance items. Factor 2 included 8 Avoidance items*
GBS	2 (10)	58.22	.87, .79	8 low factor loading (< .4) 12 improving α	Yes, but the factors demonstrated moderate correlation (r = -.28) vs. high ones (r = -.67 to -.90)
SCMN	1 (5)	74.3	.91	None	Yes
SCETH	1 (5)	79.3	.93	None	Yes
SHS	1 (6)	59.1	.86	None	Yes
CSHS-M	1 (7)	53.89	.88	3 improving α	Yes
CSHS-S	1 (12)	72.37	.96	None	Yes
MLQ-P	1 (4)	51.77	.78	9* improving α	Yes
PIL	1 (7)	61.78	.89	None	Yes
WAMI	1 (9)	66.37	.93	3* low factor loading (< .4)	Yes
DASS-Dep	1 (7)	56.8	.87	None	Yes
SWLS	1 (5)	65.66	.88	5 improving α	Yes
PHQ-15	1 (13)	33.31	.83	4 conceptual reasoning 8 low factor loading (< .4)	Yes

Note. ECRS = Experiences in Close Relationships Scale; GBS = General Belongingness Scale; SCMN = Social Connectedness in Mainstream Society Scale; SCETH = Social Connectedness in Ethnic Community Scale; SHS = State-Hope Scale; CSHS-M = Comprehensive State Hope Scales—Mastery; CSHS-S = Comprehensive State Hope Scales—Spirituality; MLQ-P = Meaning in Life Questionnaire—Presence subscale; PIL = Purpose in Life—Short-Form; WAMI = Work and Meaning Inventory; DASS-Dep = Depression subscale of Depression, Anxiety, and Stress Scales—21; SWLS = Satisfaction with Life Scale; PHQ-15 = Somatic Scale of Patient Health Questionnaire. [a] = the only reverse-coded items of the measure

Factor loadings on the rotated matrix were examined using cutoff values of ≥ .40 on the expected factor and low cross-loadings (a difference of ≥ |.15|). Factor 1 consisted of 17 Anxiety items and nine Avoidance items; Factor 2 consisted of nine Avoidance items and one Anxiety item. Four items were removed over successive EFAs since they had low factor loadings or cross-loadings (ECRS22, ECRS29, ECRS04, and ECRS34). Results from the 32-item EFA indicated that variance accounted from rotated factors was 28.39% for Factor 1 and 11.71% for Factor 2. Of note, the eight Avoidance items that loaded onto Factor 2 were reverse-keyed in the original ECRS (Brennan et al., 1998). However, since they all loaded onto one factor, we did not reverse-key them in this study. Reflecting the item contents, Factor 1 was labeled *anxious-distancing attachment* (ATTA) and Factor 2 was labeled *comfort-seeking attachment* (ATTB). The factors were not significantly correlated (r = .10, p = .062). Table 4 shows factor loadings for the final factor structure. Internal consistency coefficients were .94 for the 24 items in Factor 1 and .83 for 8 items in Factor 2.

Sense of belongingness measures. Regarding the GBS, PCA results for the 12 items indicated a two-factor structure accounting for 55.07% of the variance. The eigenvalues for these factors were 4.25 and 2.36 and inspection of the scree plot indicated a break after the second component. An EFA with ML extraction constraining 12 items to two factors was conducted using direct oblimin rotation (given that Malone et al., 2012 found two factors be highly correlated). Item GBS08 had a marginal factor loading of .39 and was removed for the third EFA. The third EFA included two factors (six items and five items for each that accounted for 38.75% and 19.47% of the variance, respectively). Reliability analyses indicated that removing item GBS12 would improve internal consistency coefficient for Factor 1 from .86 to .87; internal consistency coefficient for Factor 2 was .79. The two factors were significantly

correlated ($r = .28$, $p < .001$).

Table 4

Factor Loadings for 32-item Experiences in Close Relationships Scale (ECRS)

Item	Original Factor	Factor 1 (ATTA)	Factor 2 (ATTB)
12. I often want to merge completely with romantic partners, and this sometimes scares them away.	Anxiety	**.70**	-.13
20. Sometimes I feel that I force my partners to show more feeling, more commitment.	Anxiety	**.69**	-.01
11. I want to get close to my partner, but I keep pulling back.	Avoid	**.69**	-.12
10. I often wish that my partner's feelings for me were as strong as my feelings for him/her.	Anxiety	**.68**	.10
24. If I can't get my partner to show interest in me, I get upset or angry.	Anxiety	**.68**	.14
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.	Anxiety	**.68**	.07
7. I get uncomfortable when a romantic partner wants to be very close.	Avoid	**.68**	-.19
13. I am nervous when partners get too close to me.	Avoid	**.67**	-.19
26. I find that my partners don't want to get as close as I would like.	Anxiety	**.64**	-.05
6. I worry that romantic partners won't care about me as much as I care about them.	Avoid	**.64**	.05
8. I worry a fair amount about losing my partner.	Avoid	**.63**	.15
9. I don't feel comfortable opening up to romantic partners.	Anxiety	**.63**	-.09
5. Just when my partner starts to get close to me I find myself pulling away.	Avoid	**.61**	-.10
14. I worry about being alone.	Anxiety	**.60**	.12
18. I need a lot of reassurance that I am loved by my partner.	Anxiety	**.60**	.24
23. I prefer not to be too close to romantic partners.	Avoid	**.60**	-.16
16. My desire to be very close sometimes scares people away.	Anxiety	**.58**	-.06
17. I try to avoid getting too close to my partner.	Avoid	**.57**	-.03
32. I get frustrated if romantic partners are not available when I need them.	Anxiety	**.56**	.21
30. I get frustrated when my partner is not around as much as I would like.	Anxiety	**.53**	.16
1. I prefer not to show a partner how I feel deep down	Avoid	**.51**	-.11
36. I resent it when my partner spends time away from me.	Anxiety	**.51**	.22
2. I worry about being abandoned.	Anxiety	**.50**	.12
21. I find it difficult to allow myself to depend on romantic partners.	Avoid	**.46**	.05
33. It helps to turn to my romantic partner in times of need. (R)	Avoid	.00	**.83**
35. I turn to my partner for many things, including comfort and reassurance. (R)	Avoid	.07	**.80**
27. I usually discuss my problems and concerns with my partner. (R)	Avoid	-.03	**.68**
25. I tell my partner just about everything. (R)	Avoid	-.02	**.65**
31. I don't mind asking romantic partners for comfort, advice, or help. (R)	Avoid	-.13	**.64**
15. I feel comfortable sharing my private thoughts and feelings with my partner. (R)	Avoid	.07	**.55**
19. I find it relatively easy to get close to my partner. (R)	Avoid	.14	**.48**
3. I am very comfortable being close to romantic partners. (R)	Avoid	-.04	**.40**

Note. N = *288.* ATTA = anxious-distancing attachment scale of the ECRS; ATTAB = comfort-seeking attachment scale of the ECRS; (R) = reverse-keyed item.

Results from the PCA on 5-item Social Connectedness subscales of belongingness with mainstream society (SCMN) and with Latinos/Hispanic Americans (SCETH) both indicated a unidimensional factor structure. The eigenvalue for the first component of the SCMN was 3.72 and accounted for 74.30% of the variance in the items. Likewise, the first component of the SCETH had an eigenvalue of 3.97 and accounted for 79.30% of the variance in the items. Internal consistency coefficients were .91 for SCMN and .93 for SCETH.

State hope measures. State hope was represented by general state hope (SHS), state hope spirituality (CSHS-Spirituality), and state hope mastery (SSHS-Mastery). Results from the PCA with the six SHS items indicated a unidimensional factor structure. The eigenvalue for the first component was 3.55, accounting for 59.1% of the variance; the remaining eigenvalues were < 1. Visual inspection of the scree plot also indicated a break after the first eigenvalue. Internal consistency for the 6-item SHS was .86.

Regarding the CSHS subscales, separate PCAs were conducted for each subscale. Results from the PCA with eight items representing CSHS-Mastery indicated a one-factor structure. The eigenvalue for the first component was 4.31 and accounted for 53.89% of the variance. Subsequent eigenvalues were < 1 and the scree plot indicated a break after the first component. After removing item CSHS03, the internal consistency for the CSHS-Mastery improved from .87 to .88.

For the CSHS-Spirituality, the PCA conducted with 12 items indicated a one-factor structure. The scree plot indicated a visual break after the first component, which had an eigenvalue of 8.68 and accounted for 72.37% of the variance. The remaining components had eigenvalues of < 1. The internal consistency coefficient for the CSHS-Spirituality was .96.

Meaning in life measures. MIL was measured with three instruments: the MLQ-Presence, the PIL, and the WAMI. A PCA was conducted with the 5-item MLQ-Presence subscale and revealed a unidimensional structure. The first component had an eigenvalue of 2.59 and accounted for 51.77% of the variance. All remaining components had eigenvalues of < 1 and the scree plot inspection indicated a break after the first component. Reliability analyses indicated that removing item MLQ9 (which is reverse-coded in the original version) would improve internal consistency coefficient for Factor 1 from .70 to .78, therefore this item was removed for subsequent analyses.

The PCA on seven items from the PIL indicated one factor structure. The eigenvalue for the first component was 4.35, and accounted for 61.78% of the variance. Subsequent components had eigenvalues of < 1, which was reflected in the scree plot. The internal consistency coefficient for the 7-item PIL was .89.

Regarding the WAMI, results from the PCA with 10 items indicated a one-factor structure. The first component had an eigenvalue of 5.97 and accounted for 59.97% of the variance. The scree plot revealed a break after the first component, with the second one having an eigenvalue of 1.06. The factor loadings on the component matrix indicated that all items loaded onto the first component (≥ .40) except for item WAMI03, which loaded onto the second component. WAMI03 is reverse-coded in the original scale. Since no additional items loaded onto the second component, this one was removed from the EFA with ML extraction constraining the data to one factor. The first factor had an eigenvalue of 5.97 and accounted for 66.37% of the variance. Internal consistency for the 9-item scale was .93.

Wellness measures. Wellness involved measures of depressive symptoms (DASS-Depression), life satisfaction (SWLS), and physical complaints (PHQ-15). The PCA with seven

items in the DASS-Depression scale indicated a one-factor structure. The first component had an eigenvalue of 3.98 and accounted for 56.80% of the variance. All subsequent components had eigenvalues < 1, which was reflected in a break after the first component the scree plot. Factor loadings were also adequate. The internal consistency coefficient was .87.

The PCA with the 5-item SWLS also indicated a unidimensional structure, with the first component having an eigenvalue of 3.28 and accounting for 65.66% of the variance. The remaining components had eigenvalues < 1 and a clear break in the scree plot after the first component was evident. Reliability analyses indicated internal consistency increased from .86 to .88 after removing item SWLS05.

Regarding the PHQ-15, a PCA was conducted with 14 items (PHQ04 was excluded) and revealed a one- or two-factor structure. The first component had an eigenvalue of 4.43 and the second of 1.41; these accounted for 41.71% of the variance. The remaining components were 1.07 or lower. The scree plot indicated a clear break after the second component and a slight break after the first. Thus, an EFA with ML extraction and direct oblimin rotation with data constrained to two factors was conducted first. The factor loadings from the structure matrix indicated only two items clearly loaded onto Factor 2 (PHQ08 and PHQ06), two other items had cross-loading (PHQ11 and PHQ09), and one item had low loadings on Factor 1 (PHQ05 at .36). Two more EFAs were conducted removing item PHQ05 and PHQ11, but Factor 2 continued to consist in only two items. Therefore, the one-dimensional structure was tested with all 14 items in a fourth EFA with ML extraction, constraining the data to one factor. Results indicated that the first factor accounted for 31.63% of the variance. Since item PHQ08 loaded poorly onto this factor (at .33), it was removed from the final EFA, which had an eigenvalue of 4.33 and

accounted for 33.31% of the variance. The internal consistency coefficient of the 13-item PHQ-15 was .83.

Item Parceling

All scales except the ECRS were scored as described in the Measures section, making slight modifications in items based on the EFA and Reliability analyses described above. Item parceling was used with the items from the ECRS factors and to ensure that indicators have similar loadings onto their respective latent variables (Little et al., 2002; Russell, Kahn, Spoth, & Altmaier, 1998). First, a PCA was conducted with the 24 anxious-distancing attachment items and eight comfort-seeking attachment items. Next, items were ranked according to their factor loadings and distributed into three groups evenly according to their ranking, resulting in about an equal distribution of factor loadings of each indicator onto their respective latent variables. Item parcels were labeled ATTA 1 – 3 for anxious-distancing attachment items and ATTB 1 – 3 for comfort-seeking attachment.

Descriptive Statistics

Prior to the primary analyses, we explored main effects of demographic variables on the 19 observed variables. Independent samples *t* tests were conducted with gender and country of origin (Mexico vs. other). A one-way ANOVA was done with relationship status as the independent variable. Zero-order correlations (see Table 5) evaluated relationships between age, age of immigration, years in the U.S., English language ability, education, and income.

Sex. Results from independent samples *t* tests indicated statistically significant differences in sex across four variables. Men reported higher levels of ATTA3, (M = 3.49, SD = 1.43) than women (M = 3.12, SD = 1.35), $t(293) = 2.15$, $p = .033$. Men also reported higher

Table 5

Means, Standard Deviations, and Correlations among 4 Demographic and 19 Observed Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Age	41.49	11.71	.15	.12	.15	-.03	-.03	-.07	-.05	.12	.16	.01	.06	.06	.21	.04	.07	-.02	.03	.04	-.02
Immigration Age	24.15	9.12	-.06	-.06	-.02	.01	.05	-.02	-.05	.09	-.01	-.06	.07	.01	.08	.12	.08	.02	-.03	-.05	-.05
Years in U.S.	17.34	10.51	.21	.19	.18	-.04	-.08	-.06	-.01	.06	.19	.06	.00	.06	.16	-.06	.01	-.04	.06	.09	.02
English Language	2.35	0.93	-.12	-.13	-.20	.09	.13	.08	.25	.23	.38	.18	.15	.22	.03	.07	.24	.10	.22	-.16	-.15
Education	3.53	1.20	-.23	-.24	-.26	.15	.18	.18	.20	.22	.21	.15	.11	.11	.10	.07	.22	.07	.17	-.22	.00
Income[a]	34.72	28.64	-.15	-.20	-.20	.12	.15	.18	.19	.26	.24	.12	.24	.20	.05	.09	.24	.13	.26	-.07	-.14
1. ATTA1	3.30	1.35		.86	.85	.20	.11	.02	-.28	-.17	-.09	-.09	-.06	.00	.07	-.07	-.01	-.14	-.09	.27	.19
2. ATTA2	3.18	1.34			.85	.12	.05	-.02	-.30	-.18	-.07	-.11	-.09	-.01	.04	-.09	-.07	-.11	-.10	.24	.21
3. ATTA3	3.24	1.38				.21	.11	.01	-.33	-.18	-.13	-.10	-.08	.00	.02	-.03	-.02	-.11	-.07	.22	.16
4. ATTB1	4.95	1.51					.65	.62	.13	.22	.10	.16	.19	.11	.11	.25	.19	.14	.19	.01	.01
5. ATTB2	5.12	1.37						.68	.18	.31	.16	.30	.26	.21	.15	.33	.20	.24	.32	-.13	-.09
6. ATTB3	5.17	1.67							.24	.30	.18	.27	.28	.15	.11	.30	.18	.24	.31	-.14	-.08
7. GBS1	4.88	1.58								.28	.28	.21	.20	.12	.03	.12	.20	.24	.18	-.26	-.11
8. GBS2	5.31	1.16									.42	.34	.42	.42	.14	.33	.33	.38	.48	-.24	-.20
9. SCMN	4.35	1.58										.40	.33	.36	.23	.21	.38	.18	.35	-.13	-.13
10. SCETH	5.70	1.21											.38	.26	.20	.28	.27	.20	.34	-.13	-.14
11. SHS	6.00	1.25												.53	.21	.42	.44	.33	.50	-.19	-.23
12. CSHS-M	2.84	0.82													.54	.36	.40	.39	.46	-.19	-.23
13. CSHS-S	2.55	1.16														.23	.23	.19	.22	-.06	-.02
14. MLQ-P	5.70	1.04															.40	.44	.52	-.18	-.10
15. WAMI	3.72	0.94																.30	.39	-.15	-.12
16. PIL	5.85	0.82																	.44	-.23	-.09
17. SWLS	5.29	1.18																		-.27	-.27
18. DASS-D	0.37	0.53																			.52
19. PHQ-15	0.40	0.33																			

Note. N = 222. ATTA 1, 2, 3 = item parcels from anxious-distancing scale of the Experiences in Close Relationships Scale; ATTB 1, 2, 3 = item parcels from comfort-seeking scale of the Experiences in Close Relationships Scale; GBS 1, 2 = two subscales from the General Belongingness Scale; SCMN = Social Connectedness in Mainstream Society Scale; SCETH = Social Connectedness in Ethnic Community Scale; SHS = State-Hope Scale; CSHS-M = Comprehensive State Hope Scales—Mastery; CSHS-S = Comprehensive State Hope Scales—Spirituality; MLQ-P = Meaning in Life Questionnaire—Presence subscale; WAMI = Work and Meaning Inventory; PIL = Purpose in Life—Short-Form; DASS-D = Depression subscale of Depression, Anxiety, and Stress Scales—21; SWLS = Satisfaction with Life Scale; PHQ-15 = Somatic Scale of Patient Health Questionnaire. Absolute values of correlations greater than .12 were significant at $p < .05$; absolute values of correlations greater than .15 were significant at $p < .01$; absolute values of correlations greater than .21 were significant at $p < .001$.

[a] Income mean and standard deviation represents annual family income in the 1000s.

levels of SCMN (M = 4.65, SD = 1.59) than women (M = 4.23, SD = 1.56), $t(296) = 2.10$, p = .036. Men also reported higher SHS, (M = 6.28, SD = 1.03) than women (M = 5.88, SD = 1.32), $t(296) = 2.55$, p = .011. With an adjusted degrees of freedom value (due to significantly different variances, Levene's test F = 4.58, p = .033), men reported lower PHQ-15, (M = 0.33, SD = 0.27) than women (M = 0.44, SD = 0.35), $t(211.41) = 2.90$, p = .004.

Age. Results from zero-order correlations indicated that age was significantly positively correlated with three item parcels representing anxious-distancing attachment, (r = .12 to .15, p < .05). Results also indicated significant positive correlations between age and GBS2 (r = .12, p = .041), SCMN (r = .16, p = .005), and CSHS-Spirituality (r = .21, p < .001).

Relationship status. One-way ANOVA with relationship status as the independent variable. The three levels included single, married, and separated/divorced/widowed, the latter level of which was combined due to small n in each category. Results from the ANOVA indicated significant main effects of relationship status on all three comfort-seeking attachment item parcels: ATTB1, $F(2, 296) = 6.20$, p = .002; ATTB2, $F(2, 296) = 5.58$, p = .004; ATTB3, $F(2, 296) = 7.04$, p = .001. Significant main effects for SCETH, $F(2, 296) = 3.84$, p = .023 and SWLS, $F(2, 296) = 3.87$, p = .022, were also found. Results from LSD post-hoc analyses (see Table 6) indicated that married participants reported significantly more comfort-seeking attachment and less SCETH than the separated/divorced/widowed group. Married participants also reported greater SWLS scores than participants in the other relationship groups.

Socioeconomic status variables. Zero-order correlations of education level and annual family income were conducted with the 19 observed variables (see Table 5). These two variables showed similar trends. Both education and income were significantly negatively correlated with attachment ATTA 1 – 3 item parcels (r = -.15 to -.26, p < .01) and positively

correlated with and ATTB 1–4 parcels (r = .12 to .18, p < .05). Both variables were also positively associated with all four belongingness variables (i.e., GBS1, GBS2, SCMN, and SCETH) (r = .12 to .26, p < .06). Income was significantly positively associated with two hope variables, including SHS (r = .24, p < .001) and CSHS-Mastery (r = .20, p = .001). Either income or education were associated with higher MIL (r = .13 to .24, p < .05), lower SWLS (r = .17 to .26, p = .01), and lower DASS-Depression (r = .22, p < .001) and PHQ-15 scores (r = -.14, p = .014).

Table 6

Analysis of Variance Means and Standard Errors of Comfort-Seeking Attachment Item Parcels and Life Satisfaction Scores across Relationship Status Group

	Single *M* (SE)	Married *M* (SE)	Divorced/Separated/Widowed *M* (SE)
ATTB1	4.75^{ab} (.27)	5.11^{a} (.10)	4.26^{b} (.23)
ATTB2	4.93^{ab} (.24)	5.26^{a} (.09)	4.53^{b} (.21)
ATTB3	4.92^{ab} (.30)	5.36^{a} (.11)	4.36^{b} (.25)
SCETH	5.60^{ab} (.22)	5.80^{a} (.08)	5.26^{b} (.18)
SWLS	4.94^{a} (.21)	5.40^{b} (.08)	4.99^{a} (.18)

Note. ATTB 1, 2, 3 = item parcels from comfort-seeking scale of the Experiences in Close Relationships Scale; SCETH = Social Connectedness in Ethnic Community Scale; SWLS = Satisfaction with Life Scale. Single (n = 34); married (n = 248); divorced, separated, or widowed (n = 48). $^{a\text{-}b}$Means in a row without a common superscript letter differ (p = < 0.05) as analyzed by one-way ANOVA and LSD tests.

Country of origin. Since most participants reported their country of origin was Mexico (n = 241), the remaining participants (n = 41) were compared as a group. Results from independent samples t tests indicated significant differences in country of origin across 14 of the 19 observed variables (see Table 7 for results). Participants from Mexico generally reported higher anxious-distancing attachment (ATTA3), lower comfort-seeking attachment (ATTB2), lower

belongingness, lower state hope, lower MIL, and poorer wellness than participants from other Latin-American countries.

Table 7

Means, Standard Deviations, and Mean Comparisons between Participants from Mexico (n = 241) and Other Latin American Countries (n = 41) across Observed Variables

	Mexico	Other Country	*t* tests		
	M (*SD*)	*M* (*SD*)	*t*	*df*	*p*
ATTA3	3.33 (1.36)	2.84 (1.42)	2.39	294	.018
ATTB2	5.03 (1.36)	5.52 (1.38)	2.47	297	.014
GBS1	4.71 (1.60)	5.57 (1.31)	4.31	102.43	.000
GBS2	5.16 (1.17)	5.91 (0.92)	5.23	105.44	.000
SCMN	4.12 (1.57)	5.31 (1.21)	6.30	108.61	.000
SCETH	5.59 (1.26)	6.18 (0.84)	4.30	127.07	.000
SHS	5.90 (1.26)	6.43 (1.12)	2.95	297	.003
CSHS-M	2.78 (0.82)	3.12 (0.76)	2.86	297	.004
CSHS-S	2.45 (1.15)	2.98 (1.11)	3.20	297	.002
MLQ-P	5.62 (1.05)	6.03 (0.93)	2.76	297	.006
WAMI	3.60 (0.94)	4.18 (0.82)	4.26	295	.000
PIL	5.79 (0.83)	6.11 (0.72)	2.72	293	.007
SWLS	5.19 (1.17)	5.73 (1.13)	3.19	297	.002
DASS-D	0.40 (0.55)	0.24 (0.43)	2.12	297	.035

Note. ATTA3 = item parcel the anxious-distancing attachment scale of the ECRS ; ATTB2 = item parcel from the comfort-seeking attachment scale of the ECRS; GBS 1, 2 = two subscales from the General Belongingness Scale; SCMN = Social Connectedness in Mainstream Society Scale; SCETH = Social Connectedness in Ethnic Community Scale; SHS = State-Hope Scale; CSHS-M = Comprehensive State Hope Scales—Mastery; CSHS-S = Comprehensive State Hope Scales—Spirituality; MLQ-P = Meaning in Life Questionnaire—Presence subscale; WAMI = Work and Meaning Inventory; PIL = Purpose in Life—Short-Form; DASS-D = Depression subscale of Depression, Anxiety, and Stress Scales—21; SWLS = Satisfaction with Life Scale; PHQ-15 = Somatic Scale of Patient Health Questionnaire

Acculturation variables. Three one-item measures were used as proxy measures of acculturation: age of immigration, years living in the U.S., and language ability. Results from zero-order correlations (see Table 5) indicated that age of immigrating was positively associated with MLQ-Presence scores (r = .12, p = .04), but none of the remaining 18 observed variables. However, years in the U.S. was significantly positively associated with three anxious-distancing attachment item parcels (r = .18 to .21, p < .01), SCMN (r = .19, p = .001), and CSHS-Spirituality (r = .16, p = .006). Self-reported English language ability (measured on a Likert scale ranging from 1 = *very poorly* to 4 = *very well*) was significantly negatively correlated to three anxious-distancing attachment item parcels (r = -.12 to -.20, p < .05), and positively associated to secure attachment parcel ATTB2 (r = -.13, p = .022). Language ability was positively correlated with all four belongingness variables of (r = .18 to .38, p < .01), state hope observed variables of SHS (r = .15, p = .009) and CSHS-Mastery. (r = .22, p = < .001), and MIL WAMI scores (r = .24, p = < .001). Language ability was related to higher life satisfaction scores (r = .22, p < .001), and lower DASS-Depression (r = -.16, p = .008), and lower PHQ-15 scores (r = -.15, p = .012).

Correlations among observed variables. Table 5 presents zero-order correlations for the 19 observed variables. Statistically significant correlations (p < .001) were found among observed variables that other variables corresponding to shared latent variables (e.g., ATTA 1 – 3 variables correlated with each other). State hope variables and belongingness variables were correlated with the attachment item parcels, except for the ATTA 1 – 3 item parcels and state hope variables. In addition, most MIL scores were significantly correlated to insecure attachment, belongingness, and state hope observed variables. Exceptions to this was that MLQ-Presence and WAMI scores were not significantly correlated to ATTA 1 – 3 item parcels.

Moreover, with a few exceptions, all 16 observed variables correlated with the three observed outcome variables. Most notably SWLS scores were not significantly correlated to ATTA 1 – 3 item parcels and PHQ-15 scores were not significantly correlated to ATTB 1 – 3 item parcels and CSHS-Spirituality; moreover, DASS-Depression was not significantly correlated to ATTB1 and CSHS-Spirituality.

Primary Analysis

The hypotheses in the present study were examined with structural equation model (SEM). Prior to testing the structural model, a confirmatory factor analysis (CFA) was conducted to test whether the measurement model provides acceptable fit (Anderson & Gerbing, 1988). Both CFA and SEM analyses were conducted using maximum likelihood estimation in AMOS 20.0 statistical package (Arbuckle, 2011). Model fit was examined using a number of fit indices recommended by statisticians (Browne & Cudeck, 1993; Hu and Bentler, 1999). Although threshold values are useful as general guidelines, it is more important to compare the model to the covariance matrix across multiple fit indexes. Using a stringent threshold value in one index (i.e., perfect fit) may result in poorer fit on others (Kline, 2010). The χ^2 statistic and degrees of freedom were reported ($\chi^2 / df < 3$ indicating good fit) in addition to five approximate fit indexes. The comparative fit index (CFI) uses the same covariance matrix to evaluate whether the tested is better than an alternative model (.95 or greater indicating good fit). The CFI performs well in small sample sizes. The goodness of fit index (GFI) estimates the proportion of covariances in the sample covariance matrix to the model, comparing the model fit to no model at all (.9 or greater indicating good fit). The standardized root mean square residual (SRMR) is an absolute fit index that examines whether the implied covariance matrix matches the observed variance-covariance coefficients (.8 or lower indicating good fit). The root mean

square error of approximation (RMSEA) is a badness-of-fit index and is parsimonious since it accounts for additional model parameters (acceptable if .08 or less). The RMSEA is reported with lower and upper bounds of the 90% confidence interval.

Table 8

Fit Indices for Measurement Models

Model	χ^2 (*df*)	*p*	CFI	GFI	SRMR	RMSEA [CI]
Model 1	343.67 (137)	< .001	.91	.89	.08	.07 [.06, .08]
Model 2	289.23 (136)	< .001	.94	.90	.07	.06 [.05, .07]
Model 3	251.73 (135)	< .001	.95	.91	.06	.06 [.04, .07]
Model 4	243.60 (134)	< .001	.95	.92	.06	.05 [.04, .06]

Note. N = 288. CFI = comparative fit index; GFI = goodness of fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation.

Measurement Model

To evaluate the measurement models, fit indices were examined (see Table 8). Next, standardized regression coefficients, or factor loadings, were examined for each latent variable. The modification index (MI) values were also examined for theoretically-oriented changes to be made. The proposed model is represented in Measurement Model 1 (see Figure 2). This model includes changes from the cross-cultural validity with EFA, particularly on the attachment factors (i.e., anxious-distancing and comfort-seeking attachment rather than Anxiety and Avoidance) and the two GBS indicators (GBS1 and GBS2), which were fixed to load onto the Belongingness latent variable. Results from Measurement Model 1 (see Table 8) revealed mixed findings, χ^2 (137, N = 288) = 343.67, $p < .001$, $\chi^2 / df = 2.51$; CFI = .91; GFI = .89; SRMR = .08; RMSEA = .07 (90% CI .06, .08). Factor loadings of the 19 measured variables on the latent variables were statistically significant ($p < .001$). However, three indicators had standardized

regression coefficients of < .5, which were the GBS1 (β = .41), the PHQ-15 (β = -.42), and the DAS-Depression (β = -.40); all other indicators loaded at ≥ .5. Inspection of modification indices revealed that adding a covariance between PHQ-15 and DASS-Depression error terms would improve model fit (MI = 49.45). This change is theoretically sound since they both load onto the Wellness latent variable; therefore, it was added for Measurement Model 2.

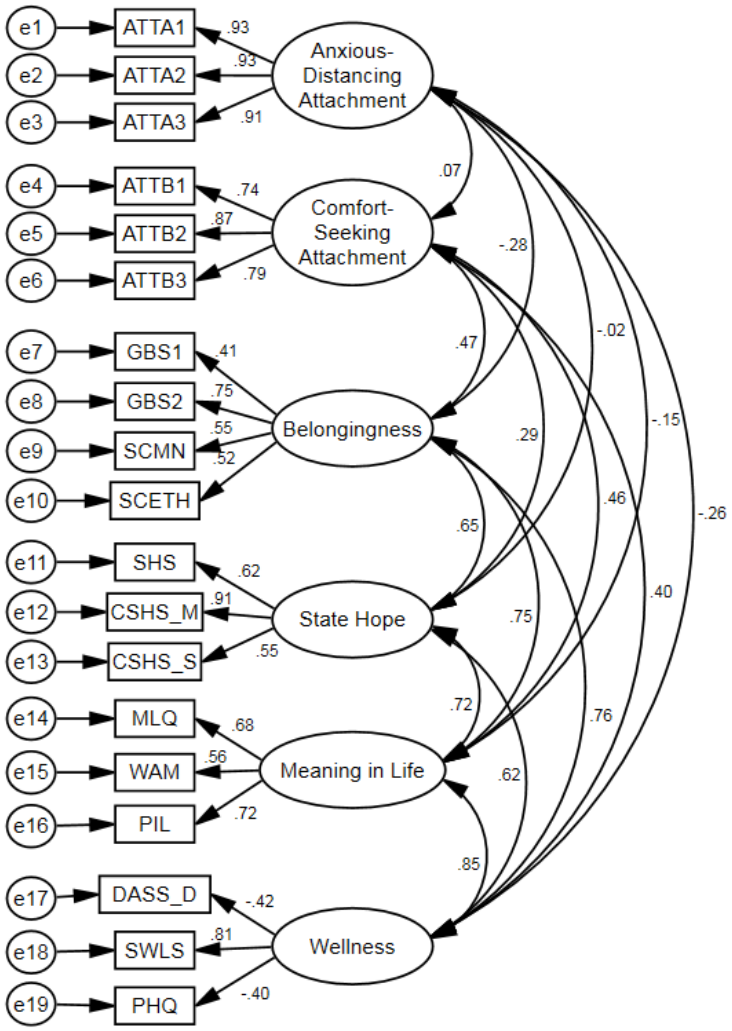

Figure 2. CFA for measurement model 1 with standardized regression coefficients

Results from the CFA with Measurement Model 2 revealed a significant improvement in model fit, $\Delta\chi^2(1) = 54.44$, $p < .001$, though fit indices continued to show mixed findings: χ^2 (136, $N = 288$) = 289.23, $p < .001$, $\chi^2 / df = 2.13$; CFI = .94; GFI = .90; SRMR = .07; RMSEA = .06 (90% CI .05, .07). Standardized regression weights were statistically significant ($p < .001$). Modification indices suggested adding an error covariance between error terms for CSHS-M and CSHS-S (MI = 11.61), both within the state hope latent variable.

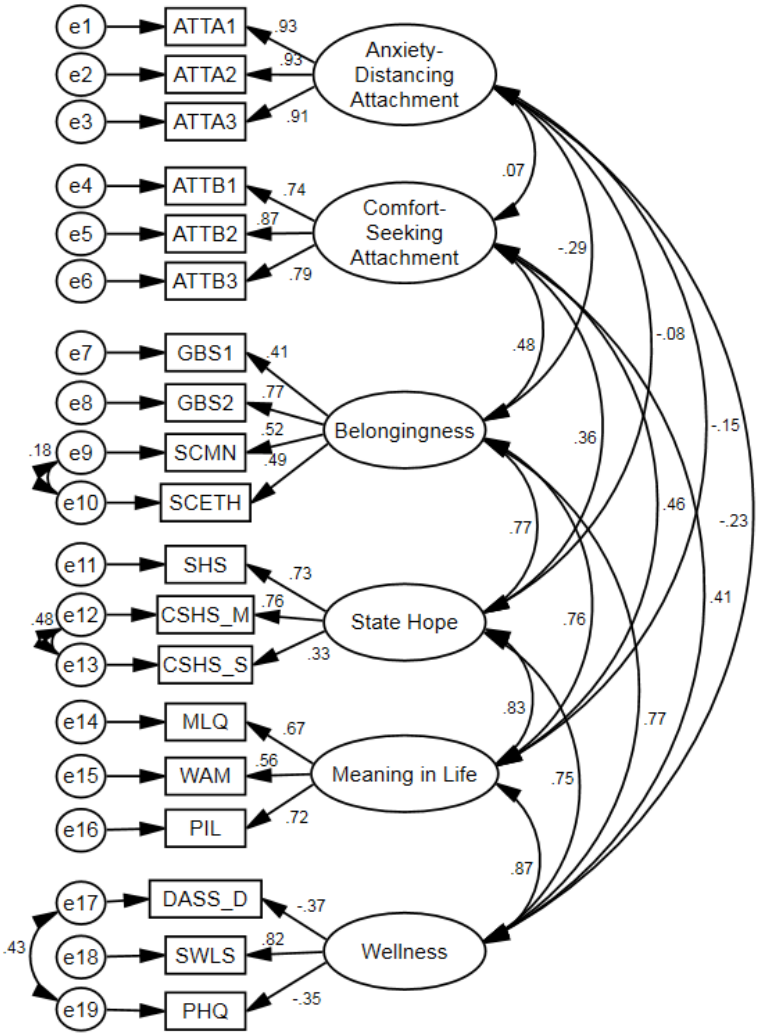

Figure 3. CFA for measurement model 4 with standardized regression coefficients

Table 9

Correlations among the Latent Variables from the Measurement Model

Latent Variable	2	3	4	5	6
1. Anxious-distancing Attachment	.07	-.29***	-.08	-.15*	-.23**
2. Comfort-seeking Attachment		.48***	.36***	.46***	.41***
3. Sense of Belonging			.77***	.76***	.83***
4. State Hope				.77***	.75***
5. Meaning in Life					.87***
6. Wellness					

*Note. N = 288.*** $p < .001$; ** $p < .01$; * $p < .05$

This correlation was included in Measurement Model 3, which further improved model fit, $\Delta\chi^2(1) = 37.5$, $p < .001$, and fit indices were all within acceptable limits, χ^2 (135, $N = 288$) = 251.73, $p < .001$, $\chi^2 / df = 1.86$; CFI = .95; GFI = .91; SRMR = .06; RMSEA = .06 (90% CI .04, .06). Factor loadings remained statistically significant ($p < .001$). Modification indices were examined and a third theoretically-relevant covariance between SCMN and SCETH error terms was recommended (MI = 7.43). This correlation was included in Measurement Model 4. Results from the CFA with

Measurement Model 4 (see Figure 3) revealed a significant improvement in model fit, $\Delta\chi^2(1) = 8.13$, $p = .004$. Fit indices also reflected optimal model fit, χ^2 (134, $N = 288$) = 243.6, $p < .001$, $\chi^2 / df = 1.82$; CFI = .95; GFI = .92; SRMR = .05; RMSEA = .05 (90% CI .04, .06). Factor loadings remained statistically significant ($p < .001$). Table 9 displays the correlations among exogenous (independent) and endogenous (mediator and dependent) latent variables. All correlation coefficients were statistically significant except the correlation between Attachment

dimensions (r = .07, p = .284), and anxious-distancing attachment with State Hope (r = -.08, p = .279). The nonsignificant correlation between attachment dimensions may be expected, since these are conceptualized as being orthogonal (Brennan et al., 1998). Correlations between State Hope and Attachment dimensions were both approaching significance. Taken together, it was concluded that the measurement model was supported by the data and the analysis procedures were proceeded onto examining the conceptual model.

Structural Equation Model for Testing Indirect Effects

The structural model was evaluated next. We hypothesized that attachment orientations (exogenous or independent variables) would contribute to MIL and wellness (endogenous, dependent variable) by mediators of one's sense of belongingness and state hope (endogenous, Tier 1 mediators). MIL was considered the second-tier mediator in the model which was hypothesized to mediate the effects of attachment, hope, and belongingness on wellness. As a first step, we started with the saturated model, with paths between all variables. Adjustments were made to the theoretical model based on cultural factor validation analyses on individual scales (EFA) and the measurement model (CFA). In order to test the structural model, structural fit was analyzed using fit indices described above (i.e., χ^2 / *df*, CFI, GFI, SRMR, and RMSEA). Modifications of the model were conducted by trimming nonsignificant pathways and exploring MIs, evaluating the change in model fit after each modification. These modifications were made based on theoretical assumptions and statistical improvement.

The baseline model, or saturated structural model, includes paths between all variables (see Figure 4). Fit indices displayed in Table 10 indicated mixed findings on the saturated model, with some indexes showed adequate fit (SRMR = .08; RMSEA = .06 [90% CI .06, .08)], others were less than optimal (CFI = .93; GFI = .89). Seven paths in the saturated model were

not significant. Paths were trimmed successively in order of smallest to largest standardized nonsignificant regression coefficient, estimating the overall model fit at each step. Conceptually, six of these paths reflected mediation effects; therefore, it was theoretically consistent to remove them from the model. For example, the path Anxious-distancing Attachment → Meaning in Life was not significant (β = -.01, p = .841) and suggests this path was mediated by State Hope, and Belongingness. This path was removed first in Structural Model 2. Fit indices were not significantly different from saturated model, $\Delta\chi^2$ (1) = 0.04, p = .584. Subsequent paths removed were Comfort-seeking Attachment → Meaning (β = .03, p = .589), Comfort-seeking → Wellness (β = -.02, p = .784), Anxious-distancing Attachment → Wellness (β = -.04, p = .372), and Hope → Wellness (β = .08, p = .664).

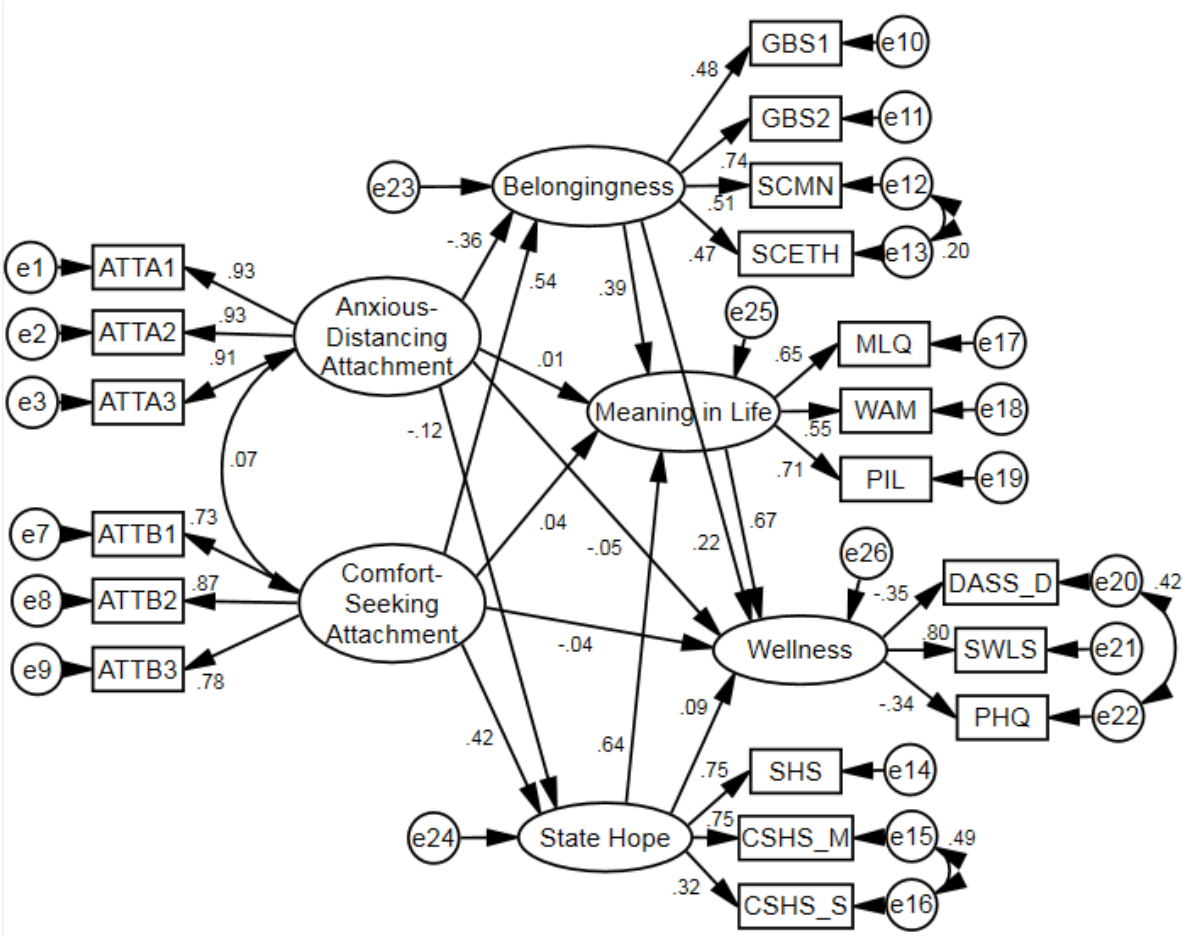

Figure 4. Saturated structural model with standardized regression coefficients

Table 10

Fit Indices for Structural Mode ls

Model	χ^2 (*df*)	*p*	CFI	GFI	SRMR	RMSEA [90% CI]
Sat. Model	312.83 (135)	< .001	.93	.89	.08	.07 [.06, .08]
Model 2	312.87 (136)	< .001	.93	.89	.08	.07 [.06, .08]
Model 3	313.17 (137)	< .001	.93	.89	.08	.07 [.06, .08]
Model 4	313.26 (138)	< .001	.93	.89	.08	.07 [.06, .08]
Model 5	313.94 (139)	< .001	.93	.89	.08	.07 [.06, .08]
Model 6	314.10 (140)	< .001	.93	.89	.08	.07 [.06, .08]
Model 7	317.38 (141)	< .001	.93	.89	.09	.07 [.06, .08]
Model 8	249.79 (140)	< .001	.95	.92	.07	.05 [.04, .06]
Model 9	252.57 (141)	< .001	.95	.91	.07	.05 [.04, .06]

Note. N = 288. CFI = comparative fit index; GFI = goodness of fit index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation.

These paths were removed in Structural Models 3 through 6, respectively. After removing the nonsignificant path Anxious-distancing Attachment → Hope (β = -.08, p = .069) in Model 7, all structural paths were statistically significant (at $p < .05$). As with Structural Model 2, removing the subsequent paths resulted in non-significant changes in fit indices ($\Delta\chi^2$ = 0.03 to 3.28, Δdf =1), suggesting Structural Model 7 was the most parsimonious model. Moreover, with the exception of the Anxious-distancing Attachment → Hope path, this model was consistent with a full mediation model.

Inspection of modification indices revealed that adding a covariance between the error terms of latent variables representing Belongingness and State Hope would improve model fit (MI = 52.50). This change is consistent with the high correlation coefficients between the latent variables in the measurement model and bivariate correlations between indicators. This

covariance was added to Structural Model 8, which resulted in a significant improvement in model fit, $\Delta\chi^2$ (1) = 67.59, $p < .001$. A final nonsignificant Belongingness → Wellness path (β = .16, p = .057) was trimmed for Structural Model 9 and resulted in nonsignificant change in model fit, $\Delta\chi^2$ (1) = 2.78, p = .095. Results from Structural Model 9 (see Figure 5) showed good model fit with the data, χ^2 (141, N = 288) = 252.57, p = .001, χ^2 / df = 1.79; CFI = .95; GFI = .91; SRMR = .07; RMSEA = .05 (90% CI .04, .06). Thirteen percent of the variance in State Hope was explained by comfort-seeking attachment and 35.9% of the variance in Sense of Belongingness was explained by both attachment variables; 77.9% of the variance in Meaning in Life was accounted by Attachment, State Hope and Belongingness; 74.8% of variance in Wellness was accounted for by the overall model.

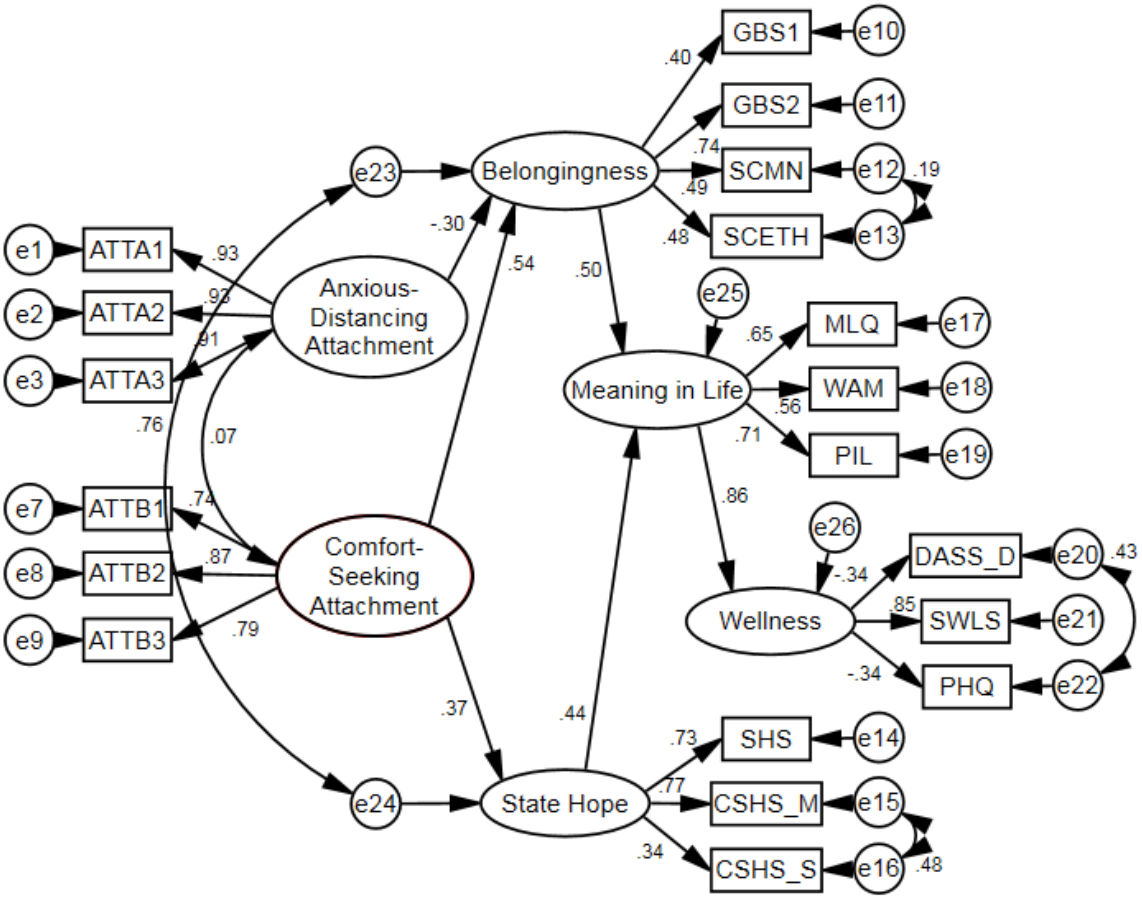

Figure 5. Structural Model 9 with standardized regression coefficients.

Indirect Effects

The mediating effects of belongingness, state hope, and MIL were tested for significance using the bootstrapping procedure in the AMOS program to create 1,000 samples from the original data (N = 288), which estimates standard errors and 95% bias-corrected confidence interval (as recommended by Mallinckrodt, Abraham, Wei, & Russell, 2006). The effect size was measured by multiplying the standardized effect sizes of each path. For paths that included two separate paths (e.g., Comfort-seeking Attachment → Belonging → Meaning and Comfort-seeking Attachment → State Hope → Meaning), the product of each path was summed for a total effect size. If the 95% CI does not include zero, the indirect path is considered significant at the .05 level. Results shown in Table 10 indicate that the four indirect effects of attachment variables on MIL and wellness did not include zero, suggesting that these were statistically significant. State Hope and Belongingness also demonstrated significant indirect effects via MIL on Wellness. In conclusion, the results from the present study suggest that attachment contributes to MIL and subsequent wellness through sense of belongingness and state hope.

Table 11

Bootstrap Analysis of the Magnitude and Statistical Significance of Indirect Effects

Paths for the indirect effects	β (standardized path coefficient and product)	95% CI	*p*
Anxious-distancing → Belonging → Meaning	(-.30) × (.50) = -.15	-.26, -.04	.006
Comfort-seeking → Belonging → Meaning	(.54) × (.5) + (.37) × (.44) = .43	.30, .56	.002
Comfort-seeking → State Hope → Meaning			
Anxious-distancing → Belonging → Meaning → Wellness	(.30) × (.50) × (.87) = -.13	-.24, -.03	.006
Comfort-seeking → Belonging → Meaning → Wellness	(.54) × (.5) × (.87) +	.24, .54	.002
Comfort-seeking → State Hope → Meaning → Wellness	(.37) × (.44) × (.87) = .37		
Belonging → Meaning → Wellness	(.5) × (.87) = .43	.15, .76	.006
State Hope → Meaning → Wellness	(.44) × (.87) = .38	.11, .63	.019

Note. N = 288

CHAPTER 5

DISCUSSION

First-generation Latino immigrants with high levels of anxious-distancing attachment and low comfort-seeking attachment experienced poorer wellness (i.e., life satisfaction, physical health, and depression) through two layers of mediators. Specifically, the effects of attachment on MIL and wellness were fully mediated by low sense of belonging and state hope (Tier 1 mediators), which represent relational and individual-level factors salient in Latino culture. MIL functioned as a full second-tier mediator of the effects of attachment insecurity, hope, and belongingness on the wellness latent outcome variable. The model in particular taps into unique experience of Latino immigrants. Immigrants with higher secure attachment and lower insecure attachment may better understand their immigration process as significant and have better psychological wellness through a sense of belongingness to their ethnic community and mainstream society and a sense of cognitive, emotional, and spiritual aspects of hope. These findings extend research on attachment theory by providing evidence that individuals with higher attachment insecurity (and lower attachment security) experience lower MIL (and wellness) through pathways of state hope and belongingness (Mikulincer & Shaver, 2013). Results also contribute to positive psychology literature with evidence that positive psychology variables (hope, belongingness, MIL) contribute to wellness among ethnic minorities, which are often understudied in positive psychology (Chang, Downey, Hirsch, & Lin, 2016) and attachment literature (Ng & Metzger, 2010).

Cross-Cultural Validity of the ECRS

Results from the EFA with ECRS items revealed a two-factor structure, though factor loadings differed from the original version (Brennan et al., 1998). Four items (three anxiety

items and one avoidance item) had low factor loadings (< .40) or cross-loadings and were removed. The first factor consisted of 24 items: 15 anxiety items and nine avoidance items. The second factor consisted of eight avoidance items. Of note, the eight items in Factor 2 included all reverse-keyed items of the original avoidance scale. Therefore, these items were positively worded (representing low avoidance), whereas the avoidance items that loaded onto the Factor 1 were negatively-worded (representing high avoidance). It is possible that the content of the negatively-worded items were not translated clearly; this is consistent with past findings with measurement translation (Halbesleben & Demerouti, 2005; McGorry, 2000) and could pose as a method effect of the measure (DiStefano & Motl, 2006). Moreover, these items have conditional phrases ("when" and "but") and include double-barreled items, both of which make it particularly difficult to translate (Brislin, Lonner, & Thorndike, 1973).

Alternatively, the different factor structure may represent some fundamental cultural differences in the attachment system between Anglo American and Latino societies. The 24 items that loaded onto Factor 1 described an insecure attachment characterized by a fear of abandonment and a need for reassurance (from anxiety items), but also behavioral distancing in the relationship (from avoidance items). A more appropriate label would be *anxious-distancing attachment.* Regarding Factor 2, the avoidance items referred to comfort with turning to one's partner for support (ECRS27, ECRS31, ECRS33, ECRS35), comfort with disclosing thoughts and feelings (ECRS 15, ECRS25), and comfort with closeness (ECRS03, ECRS19). In the original version, these eight items were reverse-scored and thus represent secure attachment or low avoidant attachment. Therefore, a better label for Factor 2 is *comfort-seeking attachment.*

A closer inspection of anxious-distancing item content indicates that six of the avoidance items refer to negative responses to closeness: avoidance of closeness (ECRS17, ECRS23),

pulling away due to closeness (ECRS05, ECRS11), or being anxious with closeness (ECRS07, ECRS 13). The remaining avoidance items included one that described difficulty depending on one's partner (ECRS21) and two that described a preference for not opening up (ECRS1, ECRS9). This pattern of factor loadings is puzzling and the six items representing pulling away from closeness seem contradictory to three anxiety items that refer to an excessive need for closeness (ECRS12, ECRS16, ECRS26). However, the need for closeness and fear of abandonment (emotional response) and pulling away from one's partner (behavioral response) are not necessarily contradictory. The nonsignificant correlation among Factors 1 and 2 also supports the orthogonal nature of the attachment dimensions (Brennan et al., 1998).

Moreover, this finding may highlight cultural nuances of the attachment framework among Latino immigrants. For example, Latino immigrants may experience an internal conflict by desiring more closeness, yet being cautious at the behavioral level. Thus, behavioral closeness, while desired, may not represent healthy relationship functioning among Latino couples. This is seemingly at odds with the notion of *familismo* and literature that Latino families hold strong emotional bonds with one another. However, these strong emotional bonds are often used to describe relationships with one's extended family, mother-son dyads, and sibling bonds, rather than romantic couples (Falicov, 1998). Moreover, for Latino couples with children, the "focus [is] on parenthood rather than partnerhood" (Falicov, 1998, p. 188), and marital satisfaction may be a byproduct rather than the primary goal of marriage. Couples that ascribe to traditional gender roles are more likely to hold parenthood as the primary value, with values of *machismo* and *marianismo* (Alegría & Woo, 2008). More research attention focused on this unique population is needed before a solid conclusion can be made.

Tier 1 Mediators: Hope and Belongingness

The first hypothesis tested whether attachment variables would contribute to a compromised MIL and subsequently poorer wellbeing by a reducing state hope achieving one's goals and decreasing a sense of belongingness to one's community and family. This hypothesis was supported by the final model in that state hope and a sense of belongingness fully mediated the effects of comfort-seeking attachment on MIL. Similarly, belongingness was found to fully mediate the effects of anxious-distancing attachment on MIL. Latent variables representing attachment insecurity were statistically significantly correlated with MIL and wellness latent variables in the measurement model; these relationships had small to medium effect sizes (βs = -.15 to .46). In the structural model, the direct paths were not significant, but the indirect paths of attachment orientations predicting MIL were significant (βs = -.13 to .43). Taken together, this finding supports the notion that attachment contributes to MIL and wellness through the mediators of hope and belongingness.

It is important to note that the path between anxious-distancing attachment and state hope was not significant in the final model, suggesting that the development of anxious-distancing attachment strategies in Latino immigrants does not disrupt their abilities to form coherent goals or perceived ability to accomplish these goals. It is possible that this type of attachment style is unrelated to one's believed ability to form goals or achieve them. Alternatively, Latino immigrants may be particularly resilient to the negative effects of anxiety-distancing attachment. Past research has found that Latinos report higher levels of hope (Chang & Banks, 2007). This sample in particular, may be well-connected and invested in the community and life in the U.S. since 71% were recruited from classes (ESL, parenting, physical health) or churches. Latino immigrants who are connected to community and family resources have been found to have higher resilience against stressors (Cardoso & Thompson, 2010).

The present study aimed to advance the literature by evaluating a developed conceptual model that depicts the direct and indirect effects of attachment insecurity, belongingness, hope, and MIL on psychological wellbeing of Latino immigrants. Attachment anxiety is characterized by hopelessness about goals, fear of rejection and failure, lower perceived social support, and lower self-worth (Mikulincer & Shaver, 2013). Therefore, individuals with anxious attachment may experience less hope about achieving long-term goals and have lower sense of belongingness, thus having lower sense of MIL and poorer wellness. Attachment avoidance is often characterized by fear of admitting defeat while pursuing goals, choosing safer goals or overestimating their ability to achieve goals, and fear of close relationships (Mikulincer & Shaver, 2007). Individuals with high avoidant attachment are less likely to develop pathways to achieve their desired and misperceive their own ability to achieve desired goals (Meyer, Oliver, & Roth, 2005), thus may report lower levels of state hope and MIL. They are also more likely to report a poorer sense of belongingness (i.e., dissatisfied with social support received) leading to poorer MIL and lower wellness.

Results of individual paths in the model are consistent with what were found in past attachment research. Insecure attachment styles have been found to predict lower sense of belonging (Hagerty et al., 2002; Rankin et al., 2000), and high belongingness was found to predict high MIL (Lambert et al., 2013). Similarly, insecure attachment was negatively associated with hope (Simmons et al., 2003). In turn, hope was found to mediate the link between attachment orientations and psychological wellbeing (e.g., Lavy & Littman-Ovadia, 2011). Moreover, indirect and direct effects of hope and MIL were found on life satisfaction and depression (Bronk et al., 2009; Mascaro & Rosen, 2005). The final model suggests that attachment theory is an adequate conceptual framework in explaining the relationships of the

variables of interest. For instance, both sense of belongingness and state hope are conceptually relevant to attachment variables. Individuals with high attachment anxiety experience fear of abandonment and have a lower sense of self-worth. In the current study, individuals with anxious-distancing attachment were less likely to perceive themselves as being worthy of belonging. Individuals with low comfort-seeking attachment tend to experience discomfort with closeness and engage in behavioral avoidance (low support seeking, low disclosure), and, in the context of state hope, are more likely to detach from approaching goals and avoid negative states. Individuals with lower comfort-seeking attachment are less likely to perceive a need for belongingness.

From a positive psychology perspective, state hope and sense of belongingness were found to contribute a higher perceived MIL. Perceiving that one belongs to friends/family, mainstream U.S. society, and Latinos would likely contribute to the cognitive component of MIL. That is, individuals with a sense of connection to individuals and communities would likely contribute to having a more consistent life narrative (understanding of oneself, the world, and the self-in-world). Conversely, state hope would contribute to the motivational component. Individuals with greater state hope (pathways thinking and agency of goals, mastery, and spiritual hope) would likely contribute to one's ability to develop goals and experience purpose in one's life.

Tier 2 Mediator: Meaning in Life

The second hypothesis was that MIL would mediate the effects of attachment, belongingness, and hope on wellbeing. This hypothesis was supported by the final model. Attachment latent variables were significantly correlated to the wellness latent variable in the measurement model, with medium effect sizes (βs = -.23 to .41). In the structural model the

paths from attachment orientations to wellness were no longer significant when including belongingness, hope, and MIL. The indirect paths, however, were significant (βs = -.13 to .37). MIL also mediated the effects of hope and belongingness on wellness. The correlation between latent variables in the measurement model represented large effect sizes (βs = .75 to .83) were no longer significant in the structural model with MIL as a mediator; the indirect effects predicting wellness via MIL were (βs = .43 to .38). Taken together, these findings support the second hypotheses in that MIL significantly mediated the effects of attachment, belongingness, and hope on wellness.

These findings are consistent with previous research. Past work has found statistically significant correlations between attachment orientations and MIL (Lopez et al., 2015; Reizer et al., 2013), as well as MIL on depression, life satisfaction, and physical health (Ryff, 2013; Steger et al., 2006). This finding is also consistent with one study that found MIL to fully mediate the relationship between attachment orientations and life satisfaction (Yen, 2014). However, these results have been mixed among Latino samples; some studies have found significant correlations between MIL and wellbeing (Vela, Castro et al., 2015), whereas others have not (Dunn & O'Brien 2009). Moreover, Latinos have also been found to report higher levels of MIL than European Americans (Pirtle & Plata, 2008).

These findings are consistent with the predictions of attachment theory. Researchers (Mikulincer & Shaver, 2013) have proposed specific pathways in which attachment behaviors impact MIL (i.e., sense of purpose, personal identity, and philosophy and faith). Attachment anxiety may interfere with these pathways since it is characterized by hopelessness about goals, fear of rejection and failure, lower perceived social support, and lower self-worth. In the present study, anxious-distancing attachment was also characterized by distancing from others (self and

partner). Conversely, lower comfort-seeking attachment may interfere with these pathways because individuals high on avoidance experience fear of admitting defeat while pursuing goals, choose safer goals or overestimating their ability to achieve goals, and have fear of close relationships.

The significant indirect effects from hope and belongingness via MIL predicting wellness are also consistent with findings from studies that indicated direct and indirect effects of hope and MIL on life satisfaction (Bronk et al., 2009) and depression (Mascaro & Rosen, 2005). These studies conceptualized hope as the mediator between MIL and wellness rather than MIL as the mediator, though the present study lends support to the mediating role of MIL. Regarding sense of belonging, direct effects of belongingness on MIL have been supported by past experimental and correlational studies (Lambert et al., 2010; Lambert et al., 2013; Stillman et al., 2009). However, these correlational studies used measured MIL with brief scales (e.g., one-item). The present study builds on these by using instruments that have been psychometrically validated (e.g., MLQ-Presence).

Limitations

The conclusions made in the present study should be viewed in light of limitations. The limitations in the present study are related to issues with methodology and limitations of the present sample.

Methodological Limitations

Results were based on data that were collected using only self-report measures. The use of self-report measures poses threats to construct validity of the present study. Participants' responses to self-report surveys may not be reflective of their true behaviors, affective, or cognitive experiences because of systematic distortions (e.g., social desirability, acquiescence).

Moreover, the use of all self-report measures may introduce mono-method bias since responses may be due to similar response style rather than true relationships between constructs. Mono-operations bias (use of only one type of instrument) was also present for our independent variable, though the present study included various outcome variables as measures of convergent validity. These limitations could be minimized using an interview measure of attachment (e.g., George, Kaplan, & Main, 1985) or qualitative data using in-depth interviews (Dale et al., 2005). In addition, the cross-sectional design of the present study limits external validity since it highlights associations between attachment orientations, meaning, and wellness, but not causal relationships.

Sample Limitations

The present study has several limitations due to the employed sampling methods. Participants of the current sample were primarily recruited from classes for ESL, parenting, and family fitness (50.9%) or from churches (20.9%). Although the current sample included participants from a broad range of economic and educational statuses, these individuals may not be representative of all Latino immigrants since they may be more committed to self-improvement and growth, thus holding education as a more important value than those who do not attend. Alternatively, they may hold jobs (or are supported by others) that enable certain flexibility in their schedule compared to other individuals that hold multiple part-time jobs to support their family.

Results from the present study were based on a sample of Latino immigrants from Texas. This poses a threat to external validity (i.e., generalizability). Random sampling of U.S. Latinos/Hispanic Americans would likely offer a different picture across age, education, and socioeconomic status factors, language fluency, and relationship status. Future research could be

useful for exploring the attachment system and variables impacting wellness across these demographic variables and geographical locations outside Texas. Finally, documentation status was not assessed. This is a sensitive topic and the participants' legal status was not asked to protect confidentiality and the safety of the participants. However, documentation status may in fact contribute to wellness or other factors.

Theoretical Implications

Despite its limitations, the present study offers several meaningful implications for cross-cultural attachment theory and for positive psychology with ethnic minorities. This study represents the first to examine attachment and one of the first to examine positive psychology variables among first-generation Latino immigrants. The first implication from this study is that the attachment system was not consistent with past research. Specifically, Factor 1 (anxious-distancing attachment) represented insecure attachment characterized by fear of abandonment, need for reassurance (anxiety items), and also a distancing by self or partner (avoidance items), whereas Factor 2 (comfort-seeking attachment) represented insecure attachment characterized by avoidance of seeking partner support, low disclosure, and discomfort with closeness. Thus, in terms of the broader debate on the universality and cross-cultural applicability of attachment as a construct, the present study suggests that differences in the factor structure of attachment dimensions as measured by the ECRS reflect cultural differences in attachment among Latinos.

This study also contributes to the validity of positive psychology constructs among ethnic minorities. At nearly 20 years since Seligman's (1998) APA address calling for more research on positive aspects to life and wellbeing, researchers have only recently begun to systematically explore these constructs among minority groups (Chang et al., 2016). A content analysis indicated relative scarcity of non-White samples and evaluation of intersectionality of gender,

race, and ethnicity in positive psychology studies since 1998 (Rao & Donaldson, 2015). These authors call for more research in the form of (a) positive aspects of the minority experience, (b) positive constructs in disenfranchised populations, (c) reinterpreting marginalized constructs from a positive lens, and (d) reenvisioning diversity studies from a positive lens. The present study examined positive constructs in a historically marginalized population, and suggests that the constructs of meaning in life, hope, and belongingness are valid in contributing to wellness among Latino immigrants.

Finally, this study supports the theoretical (Mikulincer & Shaver, 2013) and empirical links between attachment and MIL (Lopez et al., 2015). More broadly, it contributes to the notion that attachment theory acts as a framework for understanding principles of positive psychology and wellness (Mikulincer & Shaver, 2005) and is not restricted to problematic relationship functioning and psychopathology. Thus, the current study offers insights into counseling work.

Counseling Implications

The counseling implications of the attachment construct highlights the importance of assessing attachment. Although assessing for attachment orientation would assist in guiding the treatment, the current study lends itself to supporting other aspects of treatment that may be directly targeted at during counseling process. The finding that sense of belongingness contributes to wellbeing has some profound clinical implications. Conceptually, belongingness can be obtained both within therapy and as social support resources. Scholars have long been writing about the role of the therapeutic relationship (Freud, 1913). Rogers (1957) argued that the therapeutic relationship is both a necessary and sufficient condition for change to occur in counseling. Years later, common factors research found support for this notion, suggesting that

common factors (including the therapeutic relationship) accounted for more variance in psychotherapy outcome than specific therapy techniques (Lambert & Barley, 2001). From an attachment perspective, therapists can offer a secure base to clients (Bowlby, 1988; Mallinckrodt, Gantt, & Coble, 1995; Pistole, 1989), and meta-analytic research suggests attachment style is related to working alliance (Diener & Monroe, 2011).

The therapeutic relationship is crucial when working with first-generation Latino immigrants. Multicultural scholars have considered *confianza* (trust and intimacy in a relationship) to be especially important among this population (Añez, Paris, Bedregal, Davidson, & Grilo, 2005). Concurrently, Latinos have been found to report lower levels of trust in others than non-Hispanic Whites (Weaver, 2006). As with other minority groups, Latinos often experience discrimination and microaggressions and a certain degree of skepticism or "cultural mistrust" might be adaptive, and is likely to occur in counseling (Ridley, 2005; Sue & Sue, 2012; Whaley, 2001). In light of past work and the current (comfort-seeking attachment and belongingness contributes to higher MIL and wellness), clinicians working with Latino immigrants may benefit from focusing on the therapeutic relationship early and attending to the levels of confianza and cultural mistrust.

Although the therapeutic relationship is important, clients might draw a sense of belongingness from other individuals or groups. The buffering effect of social support health has received extensive evidence (e.g., Cohen, Underwood, & Gottlieb, 2000). Research has also suggested that social support may be especially important among individuals with interdependent self-construal (Shelton, Wang, & Zhu, in press). Given the value of *familismo,* first-generation clients may draw support from immediate or extended family. Moreover, belongingness in the current study was represented by general belongingness as well as connectedness to mainstream

society, and connection to one's ethnic group (i.e., Latinos or Hispanic Americans). Clinicians working with first-generation Latinos should assess for levels of acculturation and enculturation and cultural identity, which convey sense of belongingness.

Hope is also an important aspect to working with first-generation Latino immigrants. No study to date has examined hope among Latino community members. Given the importance of developing pathways to one's goals and agency that one can achieve these, hope has been used as a conceptual framework for understanding the processes involved in cognitive-behavioral therapy (Snyder et al., 2000). Moreover, 90-minute hope interventions have demonstrated increases not only in hope, but also purpose in life and vocational calling (Feldman & Dreher, 2012). This is consistent with the current finding that state hope contributed to MIL both in one's sense of purpose and meaning in work. Clinicians working with Latino immigrants may revisit their immediate goals within therapy, but also longer-term goals in life or their immigration for shaping behaviors, but also for improving one's MIL. Work with Latino immigrants could focus on the meaning of one's immigration or on the meaning attributed to enduring stressors in the process of acculturation (language learning, discrimination, loss of family connections). Contemporary psychodynamic scholars consider finding meaning in painful experiences as an important aspect of mental health (Shedler, 2010). Wong (1998a, 2012) developed the meaning-centered counseling, drawing from cognitive-behavioral therapy (acceptance and commitment to behavioral changes) and positive psychology exercises (to enhance positive affect). This method allows for spiritual aspects of meaning, which is particularly important for first-generation Latino immigrants (Taylor, Lopez, Martínez, & Velasco, 2012). In a cultural adaptation of cognitive-behavioral therapy for Latinos, Muñoz and Mendelson (2005) conceptualized meaning in life as a core belief among internal and external

realities. Finally, family therapists often use meaning-making strategies, in which individuals or families develop a narrative for a past or present experience (White & Epston, 1990). This approach has been used with Latinos in individual therapy (La Roche, 2002) and family therapy (Bermúdez & Bermúdez, 2002).

Future Directions

This study offers fruitful directions for future research. Past attachment research has found evidence for the attachment system in Latino college students (Shelton & Wang, in press), and cross-cultural work has found support for the ECRS among various racial and ethnic groups (Wei et al., 2004). Thus, the finding that the attachment factor structure did not hold as expected warrants further investigation. Given that items referring to need for social support and distancing loaded onto Factor 1, future studies could evaluate aspects of social support seeking or assurance and behavioral avoidance or distancing behaviors. Given the broad variability in Latino cultures in communicating affective content (Falicov, 1998) more work could examine the cultural differences in types of disclosure and open expression of emotions as they relate to attachment. Along these lines, future studies could evaluate the ideal attachment among Latino immigrants. Past cross-cultural work found that Taiwanese participants responding as their ideal attachment, endorsed higher avoidance and Taiwanese men endorsed higher anxiety than their U.S. counterparts (Wang & Mallinckrodt, 2006). Likewise, future research could also explore attachment using qualitative methods by asking participants how to rate their ideal relationship.

Particularly relevant for Latino immigrants and attachment theory, the role of loss and mourning could be explored in this population. Loss and mourning has been proposed as an endemic experience of immigrants as early as the 1980s (e.g., Arredondo-Dowd, 1981). Grinberg and Grinberg (1984) argued for two mourning processes including a loss of loved ones

and loss of parts of self. Arredondo-Dowd (1981) outlined a mourning process based on attachment theory (Bowlby, 1982). Recent scholars have proposed that cross-cultural loss may be a more psychometrically and conceptually robust construct than acculturation or acculturative stress (Wang, Wei, Zhao, Chuang, & Li, 2015). Future work exploring cross-cultural loss may be fruitful.

Future work could explore the role of culturally-grounded positive psychology constructs for Latino immigrants. In their content analysis of positive psychology studies, Rao and Donaldson (2015) called for more studies evaluating positive aspects of the minority experience and positive constructs in disenfranchised populations. Studies along these lines could explore the role of religiosity and spirituality in MIL among Latino immigrants. Future research could also explore the role of *familismo* in attachment and sense of belongingness among this group. A marginalized construct unique to immigrants could be the actual immigration experience.

Finally, a fruitful area of study could be in qualitative studies on MIL and hope. Although the present study offers important contributions, the richness in data from qualitative work could shed light to the unique motivators for immigrants to endure losses and stressors as part of their immigration. Along these lines, the role of hope in their lives (i.e., where they place hope, what are their ambitions) could be evaluated qualitatively. This could be done using an in-depth interview format or using short-answers in interviews.

Conclusion

Latinos represent one of the fastest growing sectors of the U.S. population and first-generation Latino immigrants present with unique challenges and risk factors to their wellness. The present study aimed to examine direct and indirect effects of attachment insecurity, state hope, belongingness, and meaning in life on wellness indicators (i.e., life satisfaction, physical

health, and depression) among this population. Findings generally supported that hypothesized model in which participants with high levels of attachment insecurity and lower security experienced poorer wellness via having a lower sense of belonging and state hope (Tier 1 mediators), and lower MIL (Tier 2 mediator). These findings extend research on attachment theory by providing evidence that individuals with higher attachment insecurity experience lower MIL (and wellness) through pathways of state hope and belongingness (Mikulincer & Shaver, 2013). Results also contribute to positive psychology literature in providing evidence that positive psychology variables (hope, belongingness, MIL) contribute to wellness among ethnic minorities, which are often understudied in positive psychology (Chang et al., 2016) and attachment literature (Ng & Metzger, 2010).

APPENDIX

DEMOGRAPHIC QUESTIONAIRE

Demographic Variables

1. Age_____
2. Sex: ____ Male ____ Female
3. Country of origin: _____
4. Age of immigration to U.S. _____ years
5. Who was your primary caregiver when you grew up (e.g., mother, parents, grandparents)? _____
6. Indicate your relationship status:
   _____Single, never married _____Divorced _____Widowed
   _____Married or domestic partnership _____Separated
7. Who <u>currently</u> lives in your household? Please indicate number of: ____ Adults ____ Children
8. What is the primary language spoken at home?___English ___Spanish ___Both equally ___Other:_____

   How well do you speak English? ___ Very well ___ Well ___ Poorly ___ Very poorly
9. Ethnicity of your neighborhood ___ All Hisp./Latino ___Mostly Hisp. ___Half Hisp. ___Few Hisp. ___None
10. What is your <u>highest level</u> of education?
    ____ No formal education ____ High School or GED / Grades 10-12
    ____ Primary School / Grades 1–6 ____ College or University / Licenciatura
    ____ Secondary School / Grades 7-9 ____ Graduate training / Maestría o Doctora

    Country where education was completed: _____
11. What is the highest level of education of your parents? Mother _____ Father _____
12. Which of the following best describes the current, yearly income of your family:
    _____$15,000 or less _____$35,000 to $49,999 _____$100,000 to $139,999
    _____$15,000 to $24,999 _____$50,000 to $74,999 _____$140,000 or more
    _____$25,000 to $34,999 _____$75,000 to $99,999

REFERENCES

Aguinis, H., Gottfredson, R. K., & Joo, H. (2013). Best-practice recommendations for defining, identifying, and handling outliers. *Organizational Research Methods*, *16*(2), 270-301.

Ainsworth, M. D. S., & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. *Child Development*, *41,* 49-67.

Ainsworth, M. D. S., Blehar, M.C., Waters, E., & Wall, S. (1978). *Patterns of Attachment: Assessed in the Strange Situation and at Home.* Hillsdale, NJ: Erlbaum.

Ainsworth, M. D., & Bowlby, J. (1991). An ethological approach to personality development. *American Psychologist*, *46,* 333-341.

Alegría, M., & Woo, M. (2009). Conceptual issues in Latino mental health. *Handbook of US Latino psychology: Developmental and community-based perspectives*, 15-30.

Alonso-Arbiol, I., Balluerka, N., & Shaver, P. R. (2007). A Spanish version of the Experiences in Close Relationships (ECR) adult attachment questionnaire. *Personal Relationships*, *14*(1), 45-63.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411.

Añez, L. M., Paris Jr, M., Bedregal, L. E., Davidson, L., & Grilo, C. M. (2005). Application of cultural constructs in the care of first generation Latino clients in a community mental health setting. *Journal of Psychiatric Practice*, *11*(4), 221-230.

Angel, R., & Guarnaccia, P. J. (1989). Mind, body, and culture: somatization among Hispanics. *Social Science & Medicine*, *28*(12), 1229-1238.

Antonovsky, A. (1993). The structure and properties of the Sense of Coherence scale. *Social Science & Medicine*, *36,* 725–733.

Arbuckle, J. L. (2011). IBM® SPSS® AmosTM 20 Users Guide. *Chicago, IL: AMOS Development Corporation*.

Armitage, C. J., & Harris, P. R. (2006). The influence of adult attachment on symptom reporting: Testing a mediational model in a sample of the general population. *Psychology and Health*, *21*(3), 351-366.

Arredondo-Dowd, P. M. (1981). Personal loss and grief as a result of immigration. *Journal of Counseling & Development*, *59*(6), 376-378.

Barrett, P. (2007). Structural equation modelling: Adjudging model fit. *Personality and Individual Differences*, *42*, 815–824.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226-244.

Baumeister, R. F. (1991). *Meanings of life*. New York: Guilford Press.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin, 117*(3), 497.

Baylor University. (2007). *The Baylor Religion Survey, Wave II*. Waco, TX: Baylor Institute for Studies of Religion.

Beck, A. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.

Becker, E. (1973). *The Denial of Death*. New York: Free Press.

Benet-Martínez, V., & John, O. P. (1998). Los Cinco Grandes across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology, 75*(3), 729-75.

Bergman, Y. S., Bodner, E., & Cohen-Fridel, S. (2013). Cross-cultural ageism: Ageism and attitudes toward aging among Jews and Arabs in Israel. *International Psychogeriatrics*, *25*(01), 6-15.

Bermúdez, J. M., & Bermúdez, S. (2002). Altar-making with Latino families: A narrative therapy perspective. *Journal of family psychotherapy*, *13*(3-4), 329-347.

Bifulco, A., Lillie, A., Ball, B., & Moran, P. (1998). *Attachment Style Interview (ASI)—Training manual*. London: Royal Holloway, University of London.

Bifulco, A., Moran, P. M., Ball, C., & Bernazzani, O. (2002). Adult attachment style: I. Its relationship to clinical depression. *Social Psychiatry and Psychiatric Epidemiology*, *37*, 50–59.

Bodner, E., Bergman, Y. S., & Cohen-Fridel, S. (2014). Do Attachment Styles Affect the Presence and Search for Meaning in Life?. *Journal of Happiness Studies*, *15*(5), 1041-1059. doi:10.1007/s10902-013-9462-7

Bowlby, J. (1979). *The making and breaking of affectional bonds.* London: Tavistock

Bowlby, J. (1980). *Attachment and loss: Vol. III. Loss, sadness, and depression.* New York: Basic Books.

Bowlby, J. (1982). *Attachment and loss: Vol. I. Attachment.* New York: Basic Books. (Original work published 1969).

Bowlby, J. (1988). Attachment, communication, and the therapeutic process. In *A Secure Base: Parent-Child Attachment and Healthy Human Development* (pp. 137-157). New York: Basic Books.

Brandstätter, M., Baumann, U., Borasio, G. D., & Fegg, M. J. (2012). Systematic review of meaning in life assessment instruments. *Psycho-Oncology*, *21*(10), 1034-1052.

Breckler, S. J. (1990). Applications of covariance structure modeling in psychology: Cause for concern? *Psychological Bulletin, 107*, 260–273.

Brennan, K.A., Clark, C.L., & Shaver, P.R. (1998). Self-report measurement of adult romantic attachment: An integrative overview. In J.A. Simpson & W.S. Rholes (Eds.), *Attachment Theory and Close Relationships* (pp. 46-76). New York: Guilford Press.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross Cultural Psychology*, 1, 185-216.

Brislin, R., Lonner, W., & Thorndike, R. (1973). *Cross-cultural Research Methods*. New York: John Wiley & Sons.

Bronk, K. C. (2014). Measuring Purpose. In K. C. Bronk (Ed.), *Purpose in Life: A Critical Component of Optimal Youth Development* (pp 21-46). New York: Springer.

Bronk, K. C., Hill, P. L., Lapsley, D. K., Talib, T. L., & Finch, H. (2009). Purpose, hope, and life satisfaction in three age groups. *The Journal of Positive Psychology*, *4*(6), 500-510.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit.*Sage focus editions*, *154*, 136-136.

Carvallo, M., & Gabriel, S. (2006). No man is an island: The need to belong and dismissing avoidant attachment style. *Personality and Social Psychology Bulletin*, *32*(5), 697-709.

Cardoso, J. B., & Thompson, S. (2010). Common themes of resilience among Latino immigrant families: A systematic review of the literature. *Families in Society: The Journal of Contemporary Social Services, 91*(3), 257-265.

Cassidy J. & Shaver, P.R. (2008). *Handbook of Attachment: Theory, Research, and Clinical Applications*. New York: Guilford Press.

Cavazos-Rehg, P. A., Zayas, L. H., & Spitznagel, E. L. (2007). Legal status, emotional well-being and subjective health status of Latino immigrants. *Journal of the National Medical Association, 99*(10), 1126.

Chang, E. C., & Banks, K. H. (2007). The color and texture of hope: Some preliminary findings and implications for hope theory and counseling among diverse racial/ethnic groups. *Cultural Diversity and Ethnic Minority Psychology*, *13*(2), 94.

Chang, E. C., Downey, C. A., Hirsch, J. K., & Lin, N. J. (2016). *Positive Psychology in Racial and Ethnic Minority Groups: Theory, Research, and Practice*. Washington, DC: American Psychological Association.

Chang, E. C., Elizabeth, A. Y., Kahle, E. R., Jeglic, E. L., & Hirsch, J. K. (2013). Is doubling up on positive future cognitions associated with lower suicidal risk in Latinos?: A look at hope and positive problem orientation.*Cognitive therapy and research*, *37*(6), 1285-1293.

Chipuer, H. M. (2001). Dyadic attachments and community connectedness: Links with youths' loneliness experiences. *Journal of Community Psychology*, *29*, 429-446.

Ciechanowski, P. S., Walker, E. A., Katon, W. J., & Russo, J. E. (2002). Attachment theory: a model for health care utilization and somatization. *Psychosomatic Medicine*, *64*(4), 660-667.

Cohen, S., Underwood, L. G., & Gottlieb, B. H. (Eds.). (2000). *Social Support Measurement and Intervention: A Guide for Health and Social Scientists*. Oxford University Press.

Collins, N. l. & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology, 58*(4), 644-663.

Contreras, F., & Juárez, F. (2013). Efecto del capital psicológico sobre las prácticas de liderazgo en pymes colombianas. *Revista Venezolana de Gerencia*, *18*(62).

Crawford, J. R., & Henry, J. D. (2003). The Depression Anxiety Stress Scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology*, *42*(2), 111-131.

Crowell, J. A., Fraley, R. C., & Shaver, P. R. (2008). Measurement of individual differences in adolescent and adult attachment. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 599-634). New York: Guilford Press.

Crumbaugh, J. C., & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of clinical psychology*, *20*(2), 200-207.

Dale, L., Albin, R., Kapolka-Ullom, S., Lange, A., McCan, M., Quaderer, K., & Shaffer, N. (2005). The meaning of work in the US for two Latino immigrants from Colombia and Mexico. *Work*, *25*(3), 187-196.

Davila, J., & Sargent, E. (2003). The meaning of life (events) predicts change in attachment security. *Personality and Social Psychology Bulletin, 29,* 1383-1395.

Daza, P., Novy, D. M., Stanley, M. A., & Averill, P. (2002). The depression anxiety stress scale-21: Spanish translation and validation with a Hispanic sample. *Journal of Psychopathology and Behavioral Assessment*, *24*(3), 195-205.

Derogatis, L. R. (1993). *BSI, Brief Symptom Inventory: administration, scoring & procedures manual*. National Computer Systems.

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, *49*(1), 71-75.

Diener, M. J., & Monroe, J. M. (2011). The relationship between adult attachment style and therapeutic alliance in individual psychotherapy: A meta-analytic review. *Psychotherapy Research, 24*(1), 12-24.

DiStefano, C., & Motl, R. W. (2006). Further investigating method effects associated with negatively worded items on self-report surveys. *Structural Equation Modeling, 13*(3), 440-464.

Duckworth, A. L., Steen, T. A., & Seligman, M. E. P. (2005). Positive psychology in clinical practice. *Annual Review of Clinical Psychology, 1,* 629–651.

Dunn, M. G., & O'Brien, K. M. (2009). Psychological health and meaning in life stress, social support, and religious coping in Latina/Latino immigrants. *Hispanic Journal of Behavioral Sciences, 31*(2), 204-227. doi:10.1177/0739986309334799

Escobar, J. I. (1995). Transcultural aspects of dissociative and somatoform disorders. *Psychiatric Clinics of North America, 18*(3), 555-569.

Falicov, C. J. (1998). *Latino families in therapy*. New York: Guilford Press.

Feeney, J. A., Noller, P., & Hanrahan, M. (1994). Assessing adult attachment. In M. B. Sperling & W. H. Berman (Eds.), *Attachment in adults: Clinical and developmental perspectives* (pp. 128– 152). New York: Guilford Press.

Feldman, D. B., & Dreher, D. E. (2012). Can hope be changed in 90 minutes? Testing the efficacy of a single-session goal-pursuit intervention for college students. *Journal of Happiness Studies, 13*(4), 745-759.

Feldman, D. B., & Snyder, C. R. (2005). Hope and the meaningful life: Theoretical and empirical associations between goal-directed thinking and life meaning. *Journal of Social and Clinical Psychology, 24*(3), 401.

Flores, E., Tschann, J. M., Dimas, J. M., Bachen, E. A., Pasch, L. A., & de Groat, C. L. (2008). Perceived discrimination, perceived stress, and mental and physical health among Mexican-origin adults. *Hispanic Journal of Behavioral Sciences*, *30*(4), 401-424.

Fraley, R. C. (2002). Attachment stability from infancy to adulthood: Meta-analysis and dynamic modeling of developmental mechanisms. *Personality and Social Psychology Review*, *6*(2), 123-151.

Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, *78*(2), 350.

Frankl, V. E. (1985). *Man's Search for Meaning.* New York: Pocket Books. (Originally published 1963)

Freud S. (1913). On the beginning of treatment: Further recommendations on the technique of psychoanalysis. In J. Strachey, (Ed. and Trans.), *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (Vol. 12, pp. 122–144). London: Hogarth Press.

Freud, S. (1957). Mourning and melancholia. In J. Strachey (Ed. And Trans.), *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (Vol. 14, pp. 237-259). London: Hogarth Press. (Original work published 1917).

Friedman, M., Rholes, W. S., Simpson, J. A., Bond, M. H., Diaz-Loving, R., & Chan, C. (2010). Attachment avoidance and the cultural fit hypothesis: A cross-cultural investigation. *Personal Relationships*, *17*, 107-126.

García-Alandete, J., Rosa, E. y Sellés, P. (2013). Estructura factorial y consistencia interna de una versión española del Purpose-In-Life Test [Factorial structure and internal consistency of a Spanish version of the Purpose-In-Life Test]. *Universitas Psychologica,*

12(2), 517-530.

García-Alandete, J., Soucase Lozano, B., Selles Nohales, P., & Martínez, E. R. (2013). Predictive role of meaning in life on psychological well-being and gender-specific differences. *Acta Colombiana de Psicología*, *16*(1), 17-24.

George, L. S. & Park, C. L. (2013). Are meaning and purpose distinct? An examination of correlates and predictors. *Journal of Positive Psychology, 8*(5), 365-375.

George, M., Kaplan, N., & Main, M. (1985). *Attachment interview for adults.* Unpublished document, University of California, Berkeley.

Gnilka, P. B., Ashby, J. S., & Noble, C. M. (2013). Adaptive and maladaptive perfectionism as mediators of adult attachment styles and depression, hopelessness, and life satisfaction. *Journal of Counseling & Development*,*91*(1), 78-86.

Goldstein, H., Bonnet, G., & Rocher, T. (2007). Multilevel structural equation models for the analysis of comparative data on educational performance. *Journal of Educational and Behavioral Statistics, 32*, 252–286.

Góngora, V., & Solano, A. C. (2011). Validación del Cuestionario de Significado de la Vida MLQ en población adulta y adolescente argentina.*Revista Interamericana de Psicología, 45*(3).

Grieco, E. M. (2010). Race and Hispanic Origin of the Foreign-Born Population in the United *States: 2007, American Community Survey Reports.* Retrieved from https://www.census.gov/prod/2010pubs/acs-11.pdf.

Griffin, D. W., & Bartholomew, K. (1994a). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships: Attach- ment processes in adulthood* (Vol. 5, pp. 17–52). London: Jessica

Kingsley.

Grinberg, L., & Grinberg, R. (1984). A psychoanalytic study of migration: Its normal and pathological aspects. *Journal of the American Psychoanalytic Association, 32*(1), 13-38.

Hablas, R., & Hutzell, R. (1982). The Life Purpose Questionnaire: An alternative to the Purpose-in-Life test for geriatric, neuropsychiatric patients. In S. A. Wawrytko (Ed.), Analecta Frankliana: The proceedings of the First World Congress of Logotherapy: 1980 (pp. 211–215). Berkeley, CA: Strawberry Hill.

Hagerty, B. M., & Patusky, K. (1995). Developing a measure of sense of belonging. *Nursing research, 44*(1), 9-13.

Hagerty, B. M., Williams, R. A., & Oe, H. (2002). Childhood antecedents of adult sense of belonging. *Journal of Clinical Psychology, 58*, 793-801.

Halbesleben, J. R., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work & Stress, 19*(3), 208-220.

Hamilton, C. E. (2000). Continuity and discontinuity of attachment from infancy through adolescence. *Child Development, 71*, 690–694.

Harlow, L. L., Newcomb, M. D., & Bentler, P. M. (1986). Depression, self-derogation, substance use, and suicide ideation: Lack of purpose in life as a mediational factor. *Journal of clinical psychology*, *42*(1), 5-21.

Hazan, C. & Shaver, P. R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry, 5,* 1-22.

Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511-524.

Hazan, C., & Zeifman, D. (1999). Pair bonds as attachments: Evaluating the evidence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of Attachment: Theory, Research, and Clinical Implications* (pp. 3–20). New York, NY: Guilford Press.

Heintzelman, S. J., & King, L. A. (2014). Life is pretty meaningful. *American Psychologist, 69*(6), 561-574.

Hernández, E. V., del Rocío Hernández-Pozo, M., & Ávila, B. A. F. (2013). Exposición a la violencia en mujeres mexicanas y su relación con indicadores de bienestar subjetivo. Revista Latinoamericana de Medicina Conductual/Latin American Journal of Behavioral Medicine, 3(2), 49-59.

Herth, K. (1991). Development and refinement of an instrument to measure hope. *Scholarly Inquiry for Nursing Practice, 5,* 39–51.

Hinnen, C., Sanderman, R., & Sprangers, M. A. (2009). Adult attachment as mediator between recollections of childhood and satisfaction with life. *Clinical psychology & psychotherapy*, *16*(1), 10-21.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1-55.

Jahoda M. 1958. *Current Concepts of Positive Mental Health*. New York: Basic Books

Janoff-Bulman, R. (1992). *Shattered Assumptions: Towards a New Psychology of Trauma*. New York: The Free Press.

Joplin, J. R, Nelson, D. L., & Quick, J. C. (1999). Attachment behavior and health: Relationships at work and home. *Journal of Organizational Behavior, 20,* 783–796.

Kandel, D. B., & Davies, M. (1982). Epidemiology of depressive mood in adolescents: an empirical study. *Archives of General Psychiatry*, *39*(10), 1205.

Kenny, D. A., & Kashy, D. A. (1992). Analysis of the multitrait–multimethod matrix by confirmatory factor analysis. *Psychological Bulletin*, *112*, 165–172.

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., pp. 233–265). New York: McGraw-Hill.

Kidd, T., & Sheffield, D. (2005). Attachment style and symptom reporting: Examining the mediating effects of anger and social support. *British Journal of Health Psychology*, *10*(4), 531-541.

Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013). Gratitude and grit indirectly reduce risk of suicidal ideations by enhancing meaning in life: Evidence for a mediated moderation model. *Journal of Research in Personality*, *47*(5), 539-546.

Kline, R. B. (2010). *Principles and practice of structural equation modeling* (3rd ed.).

Kocalevent, R. D., Hinz, A., & Brähler, E. (2013). Standardization of the depression screener patient health questionnaire (PHQ-9) in the general population. *General hospital psychiatry*, *35*(5), 551-555.

Kohout, F. J., Berkman, L. F., Evans, D. A., & Cornoni-Huntley, J. (1993). Two shorter forms of the CES-D depression symptoms index. *Journal of aging and health*, *5*(2), 179-193.

Kohut, H. (1971). *The analysis of the self.* New York: International Universities Press.

Kohut, H. (1977). *The restoration of the self.* New York: International Universities Press.

Kohut, H. (1984). *How does analysis cure?* New York: International Universities Press.

Krause, N. (2007). Longitudinal study of social support and meaning in life. *Psychology and aging*, *22*(3), 456.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2002). The PHQ-15: validity of a new measure for evaluating the severity of somatic symptoms. *Psychosomatic Medicine*, *64*(2), 258-266.

La Roche, M. J. (2002). Psychotherapeutic considerations in treating Latinos. *Harvard Review of Psychiatry*, *10*(2), 115-122.

Lambert, M. J., & Barley, D. E. (2001). Research summary on the therapeutic relationship and psychotherapy outcome. *Psychotherapy: Theory, research, practice, training*, *38*(4), 357.

Lambert, M. J., Hansen, N. B., Umpress, V., Lunnen, K., Okiishi, J., Burlingame, G. M., & Reisinger, C. W. (1996). Administration and scoring manual for the OQ-45.2. American Credentialing Services

Lambert, N. M., Stillman, T. F., Baumeister, R. F., Fincham, F. D., Hicks, J. A., & Graham, S. (2010). Family as a salient source of meaning in young adulthood. *Journal of Positive Psychology*, *5*, 367-376.

Lambert, N. M., Stillman, T. F., Hicks, J. A., Kamble, S., Baumeister, R. F., & Fincham, F. D. (2013). To belong is to matter sense of belonging enhances meaning in life. *Personality and Social Psychology Bulletin*, 0146167213499186.

Lavy, S., & Littman-Ovadia, H. (2011). All you need is love? Strengths mediate the negative associations between attachment orientations and life satisfaction. *Personality and Individual Differences*, *50*(7), 1050-1055.

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, & coping. New York: Springer.

Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: The Social Connectedness and the Social Assurance scales. *Journal of Counseling Psychology, 42*(2), 232.

Liu, L., Cohen, S., Schulz, M. S., & Waldinger, R. J. (2011). Sources of somatization: Exploring the roles of insecurity in relationships and styles of anger experience and expression. *Social Science & Medicine, 73*(9), 1436-1443.

Lopez, F. G., & Gormley, B. (2002). Stability and change in adult attachment style over the first-year college transition: Relations to self-confidence, coping, and distress patterns. *Journal of Counseling Psychology, 49*(3), 355-364. doi:1.1037/0022-0167.49.3.355

Lopez, F. G., Melendez, M. C., & Rice, K. G. (2000). Parental divorce, parent-child bonds, and adult attachment orientations among college students: A comparison of three racial/ethnic groups. *Journal of Counseling Psychology, 47*, 177–186.

Lopez, F. G., Ramos, K., Nisenbaum, M., Thind, N., & Ortiz-Rodriguez, T. (2015). Predicting the Presence and Search for Life Meaning: Test of an Attachment Theory-Driven Model. *Journal of Happiness Studies, 16*(1), 103-116. doi:10.1007/s10902-013-9498-8

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy, 33*(3), 335-343.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1*, 130–149.

Mallinckrodt, B., Abraham, W. T., Wei, M., & Russell, D. W. (2006). Advances in testing the statistical significance of mediation effects. *Journal of Counseling Psychology, 53*(3), 372.

Mallinckrodt, B., Gantt, D. L., & Coble, H. M. (1995). Attachment patterns in the psychotherapy relationship: Development of the Client Attachment to Therapist Scale. *Journal of Counseling Psychology, 42*, 307-307.

Malone, G. P., Pillow, D. R., & Osman, A. (2012). The general belongingness scale (GBS): Assessing achieved belongingness. *Personality and Individual Differences*, *52*(3), 311-316.

Marganska, A., Gallagher, M., & Miranda, R. (2013). Adult attachment, emotion dysregulation, and symptoms of depression and generalized anxiety disorder. *American Journal of Orthopsychiatry, 83*(1), 131-141.

Marin, G., & Marin, B. V. (1991). *Research with Hispanic Populations.* Newbury Park, CA: Sage.

Mascaro, N., & Rosen, D. H. (2005). Existential meaning's role in the enhancement of hope and prevention of depressive symptoms. *Journal of Personality*, *73*(4), 985-1014.

Mascaro, N., & Rosen, D. H. (2008). Assessment of existential meaning and its longitudinal relations with depressive symptoms. *Journal of Social and Clinical Psychology*, *27*(6), 576.

Mascaro, N., Rosen, D. H., & Morey, L. C. (2004). The development, construct validity, and clinical utility of the spiritual meaning scale. *Personality and Individual Differences*, *37*(4), 845-860.

McGorry, S. Y. (2000). Measurement in a cross-cultural environment: survey translation issues. *Qualitative Market Research: An International Journal, 3*(2), 74-81.

Meyer, B., Olivier, L., & Roth, D. A. (2005). Please don't leave me!: BIS/BAS, attachment styles, and responses to a relationship threat. *Personality and Individual Differences, 38*, 151–162.

Mikulincer, M., & Shaver, P. R. (*2005*). *Mental representations* of *attachment security*: Theoretical foundation for a positive social psychology. In M. W. Baldwin (Ed.), *Interpersonal Cognition* (pp. *233-266*). New York: Guilford Press.

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change.* New York: Guilford Press.

Mikulincer, M., & Shaver, P. R. (2013). Attachment orientations and meaning in life. In J. A. Hicks & C. Routledge (Eds.), *The Experience of Meaning in Life.* (pp. 287-304). New York: Springer.

Montalban, S. R., Vives, A. C., & Garcia-Garcia, M. (2010). Validation of the Spanish version of the PHQ-15 questionnaire for the evaluation of physical symptoms in patients with depression and/or anxiety disorders: DEPRE-SOMA study. *Actas Esp Psiquiatr, 38*(6), 345-57.

Morey, L. C. (1991). *Personality Assessment Inventory professional manual*. Odessa, FL: Personality Assessment Resources, Inc.

Nuñez, A. M. (2009). A critical paradox? Predictors of Latino students' sense of belonging in college. *Journal of Diversity in Higher Education, 2,* 46–61.

Oishi, S., & Diener, E. (2014). Residents of poor nations have a greater sense of meaning in life than residents of wealthy nations. *Psychological Science, 25,* 422-430.

Osman, A., Wong, J. L., Bagge, C. L., Freedenthal, S., Gutierrez, P. M., & Lozano, G. (2012). The Depression Anxiety Stress Scales—21 (DASS-21): Further Examination of Dimensions, Scale Reliability, and Correlates. *Journal of clinical psychology*, *68*(12), 1322-1338.

Park, C. L . (2010). Making sense of the meaning literature: A n integrative review of meaning making and its effects on adjustment to stressful life events. Psychological Bulletin, 136, 257-301. doi:10.1037/a0018301

Park, C. L. (in press). Meaning making in the context of disasters. *Journal of clinical psychology*.

Park, C. L., & Folkman, S. (1997). Meaning in the context of stress and coping. Review of General Psychology, 1, 115–144. doi:10.1037/1089-2680.1.2.115

Park, N., Peterson, C., & Ruch, W. (2009). Orientations to happiness and life satisfaction in twenty-seven nations. *The Journal of Positive Psychology*,*4*(4), 273-279.

Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology*, *52*(1), 1-10.

Perez, M.C. & Fortuna, L. (2005). Psychological stressors, psychiatric diagnoses, and utilization of mental health services among undocumented immigrant Latinos. *Journal of Immigrant and Refugee Services, 3,* 107-123.

Peterson, C., & Seligman, M. E. (2004). *Character Strengths and Virtues: A Handbook and Classification*. Oxford University Press.

Peterson, C., Park, N., & Seligman, M. E. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of happiness studies*, *6*(1), 25-41.

Pirtle T, Plata M (2008). Meaning in life among Latino university Students Perceptions of meaning in life among first-semester Latino university Students. *International Journal of Existential Psychology& Psychotherapy 2* (1).

Pistole, M. C. (1989). Attachment: Implications for counselors. *Journal of Counseling and Development*, *68*(2), 190-193.

Preacher, K. J., & Coffman, D. L. (2006). Computing power and minimum sample size for RMSEA. Retrieved November 15, 2009, from *http://people.ku.edu/~preacher/rmsea/rmsea.htm*

Proulx, T., & Inzlicht, M. (2012). The five "A" s of meaning maintenance: Finding meaning in the theories of sense-making. *Psychological Inquiry*,*23*(4), 317-335.

Proulx, T., Heine, S. J., & Vohs, K. D. (2010). When is the unfamiliar the uncanny? Meaning affirmation after exposure to absurdist literature, humor, and art. *Personality and Social Psychology Bulletin*.

Rankin, L. B., Saunders, D. G., & Williams, R. A. (2000). Mediators of attachment style, social support, and sense of belonging in predicting woman abuse by African American men. *Journal of Interpersonal Violence*, *15*(10), 1060-1080.

Rao, M. A., & Donaldson, S. I. (2015). Expanding opportunities for diversity in positive psychology: An examination of gender, race, and ethnicity. *Canadian Psychology/Psychologie canadienne*, *56*(3), 271.

Reizer, A., Dahan, D., & Shaver, P. R. (2013). The contributions of attachment and caregiving orientations to living a meaningful life. *Psychology, 4*(12), 1039. doi:10.4236/psych.2013.412151

Reker, G. T., & Wong, P. T. P. (1988). Aging as an individual process: Toward a theory of personal meaning. In J. E. Birren & V. L. Bengston (Eds.), *Emergent theories of aging* (pp. 214–246). New York: Springer.

Ridley, C. R. (2005). *Overcoming unintentional racism in counseling and therapy: A practitioner's guide to intentional intervention* (Vol. 5). Sage publications.

Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology, 21*, 95–103.

Rusch, D., & Reyes, K. (2013). Examining the effects of Mexican serial migration and family separations on acculturative stress, depression, and family functioning. *Hispanic Journal of Behavioral Sciences, 35*(2), 139-158. doi: 10.1177/0739986312467292

Russell, D. W., Kahn, J. H., Spoth, R., & Altmaier, E. M. (1998). Analyzing data from experimental studies: A latent variable structural equation modeling approach. *Journal of Counseling Psychology, 45*(1), 18.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57,* 1069–1081.

Ryff, C. D. (2013). Eudaimonic well-being and health: Mapping consequences of self-realization In A. S. Waterman (Ed.), The best within us: Positive psychology perspectives on eudaimonia. (pp. 77-98). Washington, DC US: American Psychological Association.

Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry, 9*(1), 1–28.

Ryff, C. D., Love, G. D., Urry, H. L., Muller, D., Rosenkranz, M. A., Friedman, E. M., et al. (2006). Psychological well-being and ill-being: Do they have distinct or mirrored

biological correlates? *Psychotherapy and Psychosomatics, 75*, 85–95.

Scannell, E. D., Allen, F. C., & Burton, J. (2002). Meaning in life and positive and negative well-being. *North American Journal of Psychology*.

Schmitt, D. P., Alcalay, L., Allensworth, M., Allik, J., Ault, L., Austers, I., ... & Kardum, I. (2004). Patterns and Universals of Adult Romantic Attachment Across 62 Cultural Regions Are Models of Self and of Other Pancultural Constructs? *Journal of Cross-Cultural Psychology,* 35(4), 367-402.

Schulenberg, S. E., & Melton, A. M. (2010). A confirmatory factor-analytic evaluation of the Purpose in Life test: Preliminary psychometric support for a replicable two-factor model. *Journal of Happiness Studies, 11*(1), 95-111.

Schulenberg, S. E., Schnetzer, L. W., & Buchanan, E. M. (2011). The Purpose in Life test—Short form: Development and psychometric support. *Journal of Happiness Studies, 12,* 861–876.

Scioli, A., Ricci, M., Nyugen, T., & Scioli, E. R. (2011). Hope: Its nature and measurement. *Psychology of Religion and Spirituality*, *3*(2), 78.

Seligman, M. E. (1998). *Positive psychology network concept paper.* Retrieved from http://www.sas.upenn.edu/psych/seligman/ppgrant.htm

Seligman, M. E. P. (2002). *Authentic happiness.* New York: Free Press.

Shaver P. R., Mikulincer M. (2012). An attachment perspective on coping with existential concerns. In: P. R. Shaver & M. Mikulincer (Eds.) *The Social Psychology of Meaning, Mortality, And Choice* (pp 291-307). Washington, DC: American Psychological Association.

Shedler, J. (2010). The efficacy of psychodynamic psychotherapy. *American Psychologist, 65*(2), 98–109.

Shelton, A. J., & Wang, C. D. (in press). Adult Attachment among US Latinos: Validation of the Spanish Experiences in Close Relationships Scale. *Journal of Latina/o Psychology.*

Shelton, A. J., Wang, C. D, & Zhu, W. (in press). Perceived social support and mental health: Cultural orientations as moderators. *Journal of College Counseling.*

Shorey, H. S., Snyder, C. R., Yang, X., & Lewin, M. R. (2003). The role of hope as a mediator in recollected parenting, adult attachment, and mental health. *Journal of Social and Clinical Psychology*, *22*(6), 685.

Simmons, B. L., Nelson, D. L., & Quick, J. C. (2003). Health for the hopeful: A study of attachment behavior in home health care nurses. *International Journal of Stress Management, 10*(4), 361.

Simpson, J. (1990). Influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology, 59,* 971-98.

Simpson, J. A., Rholes, W. S., & Phillips, D. (1996). Conflict in close relationships: an attachment perspective. *Journal of personality and social psychology*, *71*(5), 899.

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13,* 249–275.

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., et al. (1991). The will and the ways: Development and validation of an individual–differences measure of hope. *Journal of Personality and Social Psychology, 60,* 570–585.

Snyder, C. R., Ilardi, S. S., Cheavens, J., Michael, S. T., Yamhure, L., & Sympson, S. (2000). The role of hope in cognitive-behavior therapies. *Cognitive therapy and Research, 24*(6), 747-762.

Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the State Hope Scale. *Journal of Personality and Social Psychology, 70*, 321–335.

SPSS, I. (2011). IBM SPSS statistics for Windows, version 20.0. *New York: IBM Corp*.

Steger, M. F. (2012). Making meaning in life. *Psychological Inquiry*, *23*(4), 381-385.

Steger, M. F. (2013). Experiencing meaning in life: Optimal functioning at the nexus of well-being, psychopathology, and spirituality. In P. T. P. Wong (Ed.), *The Human Quest for Meaning* (2nd Edition). New York: Routledge.

Steger, M. F., & Kashdan, T. B. (2007). Search for meaning in life. In R. Baumeister & K. Vohs (Eds.), *Encyclopedia of Social Psychology* (pp. 783-785). Thousand Oaks, CA: Sage Publications.

Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of Career Assessment*, 1069072711436160.

Steger, M. F., Frazier, P. A., & Zacchanini, J. L. (2008). Terrorism in two cultures: Stress and growth following September 11 and the Madrid train bombings. *Journal of Loss and Trauma*, *13*(6), 511-527.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, *53*, 30–93.

Steger, M. F., Mann, J. R., Michels, P., & Cooper, T. C. (2009). Meaning in life, anxiety, depression, and general health among smoking cessation patients. *Journal of psychosomatic research*, *67*(4), 353-358.

Stillman, T. F., Baumeister, R. F., Lambert, N. M., Crescioni, A. W., DeWall, C. N., & Fincham,

F. D. (2009). Alone and with- out meaning: Life loses meaning following social exclusion. *Journal of Experimental Social Psychology, 45,* 686-694.

Stotland, E. (1969). *The psychology of hope.* San Francisco: Jossey-Bass.

Sue, D. W., & Sue, D. (2012). *Counseling the culturally diverse: Theory and practice.* New York: John Wiley & Sons.

Tabachnick, B. G., and Fidell, L. S. (2012). Using Multivariate Statistics , 6th ed. Boston : Pearson.

Tacón, A. M., & Caldera, Y. M. (2001). Attachment and parental correlates in late adolescent Mexican American women. *Hispanic Journal of Behavioral Sciences, 23,* 71-87.

Taylor, P., Lopez, M. H., Martínez, J. H., & Velasco, G. (2012). When labels don't fit: Hispanics and their views of identity. *Washington, DC: Pew Hispanic Center*.

United States Census Bureau (2012). *Most Children Younger than Age 1 are Minorities, Census Bureau Reports*. Retrieved from http://www.census.gov/newsroom/releases/archives/population/cb12-9.html.

van Dierendonck, D., Díaz, D., Rodríguez-Carvajal, R., Blanco, A., & Moreno-Jiménez, B. (2008). Ryff's six-factor model of psychological well-being, a Spanish exploration. *Social Indicators Research*, *87*(3), 473-479.

Vázquez, C., Duque, A., & Hervás, G. (2013). Satisfaction with life scale in a representative sample of Spanish adults: validation and normative data. *The Spanish journal of psychology*, *16*, E82.

Vázquez, C., Duque, A., & Hervás, G. (2013). Satisfaction with life scale in a representative sample of Spanish adults: validation and normative data. *The Spanish journal of psychology*, *16*, E82.

Vela, J. C., Castro, V., Cavazos, L., Cavazos, M., & Gonzalez, S. L. (2014). Understanding Latina/o students' meaning in life, spirituality, and subjective happiness. *Journal of Hispanic Higher Education, 14*(2), 171-184.

Vela, J. C., Ikonomopoulos, J., Hinojosa, K., Gonzalez, S. L., Duque, O., & Calvillo, M. (2015). The Impact of Individual, Interpersonal, and Institutional Factors on Latina/o College Students' Life Satisfaction. *Journal of Hispanic Higher Education.*

Vela, J. C., Lerma, E., Lenz, A. S., Hinojosa, K., Hernandez-Duque, O., & Gonzalez, S. L. (2014). Positive psychology and familial factors as predictors of Latina/o students' hope and college performance. *Hispanic Journal of Behavioral Sciences*. 36(4), 452-469

Vela, J. C., Lu, M. T. P., Lenz, A. S., & Hinojosa, K. (2015). Positive psychology and familial factors as predictors of Latina/o students' psychological grit. *Hispanic Journal of Behavioral Sciences*, *37*(3), 287-303.

Wang, C. D. & Mallinckrodt, B. (2006). Differences between Taiwanese and US cultural beliefs about ideal adult attachment. *Journal of Counseling Psychology*, *53*(2), 192-204.

Wang, C. D., Scalise, D. A., Barajas-Munoz, I. A., Julio, K., & Gomez, A. (2016). Attachment, Acculturation, and Psychosomatic Complaints Among Hispanic American University Students. *Journal of College Counseling*, *19*(1), 45-60.

Wang, K. T., Wei, M., Zhao, R., Chuang, C. C., & Li, F. (2015). The Cross-Cultural Loss Scale: Development and psychometric evaluation. *Psychological assessment*, *27*(1), 42.

Wearden, A., Cook, L., & Vaughan-Jones, J. (2003). Adult attachment, alexithymia, symptom reporting, and health-related coping. *Journal of psychosomatic research*, *55*(4), 341-347.

Weaver, C. N. (2006). Trust in people among Hispanic Americans. *Journal of Applied Social Psychology*, *36*(5), 1160-1172.

Wei, M., Russell, D. W., & Zakalik, R. A. (2005). Adult attachment, social self-efficacy, self-disclosure, loneliness, and subsequent depression for freshman college students: A longitudinal study. *Journal of Counseling Psychology, 52,* 602–614.

Wei, M., Russell, D. W., Mallinckrodt, B., & Zakalik, R. A. (2004). Cultural equivalence of adult attachment across four ethnic groups: Factor structure, structured means, and associations with negative moods. *Journal of Counseling Psychology, 51,* 408–417.

Whaley, A. L. (2001). Cultural mistrust: An important psychological construct for diagnosis and treatment of African Americans. *Professional Psychology: Research and Practice, 32*(6), 555.

White, M., & Epston, D. (1990). *Narrative Means of Therapeutic Ends.* New York: W. W. Norton & Company.

Wildschut, T., Sedikides, C., Routledge, C., Arndt, J., & Cordaro, F. (2010). Nostalgia as a repository of social connectedness: the role of attachment-related avoidance. *Journal of personality and social psychology, 98*(4), 573.

Wong, P. T. P. (1998a). Implicit theories of meaningful life and the development of the Personal Meaning Profile (PMP). In P. T. P. Wong & P. S. Fry (Eds.), *The human quest for meaning: A handbook of psychological research and clinical applications* (pp. 111–140). Mahwah, NJ: Erlbaum.

Wong, P. T. P. (1998a). The endurance of logotherapy. *International Forum for Logotherapy, 21*(1), 47.

Wong, P. T. P. (2011). Positive psychology 2.0: Towards a balanced interactive model of the good life. *Canadian Psychology, 52*(2), 69-81.

Wong, P. T. P. (2014). Viktor Frankl's meaning seeking model and positive psychology. In A. Batthyany & P. Russo-Netzer (Eds.), *Meaning In Existential And Positive Psychology.* New York: Springer.

Wright, S. L., & Perrone, K. M. (2010). An examination of the role of attachment and efficacy in life satisfaction. *The Counseling Psychologist*.

Yalom, I. (1980). *Existential psychotherapy*. New York: Basic Books.

Yen, C. L. (2014). Why are people with insecure attachments unhappy? The mediation of meaning in life. *International Journal of Psychology*, *49*(5), 404-408.

Yoon, E., & Lee, R. M. (2010). Importance of social connectedness as a moderator in Korean immigrants' subjective well-being. *Asian American Journal of Psychology*, *1*(2), 93.

Yoon, E., Jung, K. R., Lee, R. M., & Felix-Mora, M. (2012). Validation of Social Connectedness in Mainstream Society and the Ethnic Community Scales. *Cultural Diversity and Ethnic Minority Psychology*, *18*(1), 64.

Yoon, E., Lee, R. M., & Goh, M. (2008). Acculturation, social connectedness, and subjective well-being. *Cultural Diversity and Ethnic Minority Psychology*,*14*(3), 246.

Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and psychological well-being. *British Journal of Psychology*, *83*(1), 133-145.

Zilioli, S., Slatcher, R. B., Ong, A. D., & Gruenewald, T. (2015). Purpose in life predicts allostatic load ten years later. *Journal of Psychosomatic Research, 79*, 451–457.

Zuroff, D. C., & Fitzpatrick, D. K. (1995). Depressive personality styles: Implications for adult attachment. *Personality and Individual Differences*,*18*(2), 253-265.